

RADIO CONTROLLED 32 SIZE ENGINE POWERED HELICOPTER

CONCEPT 30 DX[®]

- THE CONCEPT 30 DX IS EQUIPED WITH HEAVY ALUMINUM FLYBAR PADDLES PROVIDING EXCELLENT STABILITY FOR THE NOVICE PILOT.
- DDF STYLE ROTOR HEAD FOR OUTSTANDING STABILITY.
- FLEXIBLE LANDING GEAR TO ABSORB HARD LANDINGS.
- EASY STEP-BY-STEP INSTRUCTION MANUAL.
- COMPOSITE FIBERGLASS-FOAM BLADES FOR EXCELLENT BALANCE AND C.G. (27% FROM THE LEADING EDGE.).
- EASY ACCESS CONE STARTING SYSTEM.
- FLEXIBLE POLYPROPYLENE BODY WITH COMPOSITE MAIN STRUCTURE. THE MOST DURABLE HELICOPTER AVAILABLE.
- THE CONCEPT 30 DX COMES WITH 18 BALL BEARINGS.

Radio : 4 to 5 Channel and Gyro (Not Included)
Fuel: 5% to 15% Nitro (Not Included)
Starting Accessories: Starter, Starter Battery, Glow Plug Clip, etc. (Not Included)

Main Rotor Span: 45.6"
Length: 39.8"
Tank Capacity: 7.5 oz.
Weight: 5 Lbs.
Height: 13.6"
Width: 4.7"
Gear Ratio: 9.76:4.6

WARNING

This Radio Controlled Helicopter is not a toy! It is a complex machine that is capable of serious bodily harm and property damage. IT IS YOUR RESPONSIBILITY AND YOURS ALONE to complete this kit correctly, properly install all R/C components, and test fly the helicopter. IF YOU ARE JUST STARTING R/C MODELING, CONSULT YOUR LOCAL HOBBY SHOP OR WRITE TO THE ACADEMY OF MODEL AERONAUTICS TO FIND AN EXPERIENCED INSTRUCTOR IN YOUR AREA.

YOSHO

KIT No. 4089

ENTIRE CONTENTS © 1992, Hobbico, INC.

V2.0

BEFORE BEGINNING TO BUILD

BEFORE BEGINNING TO BUILD THE CONCEPT 30 DX, MAKE SURE IT'S THE RIGHT MODEL FOR YOU!

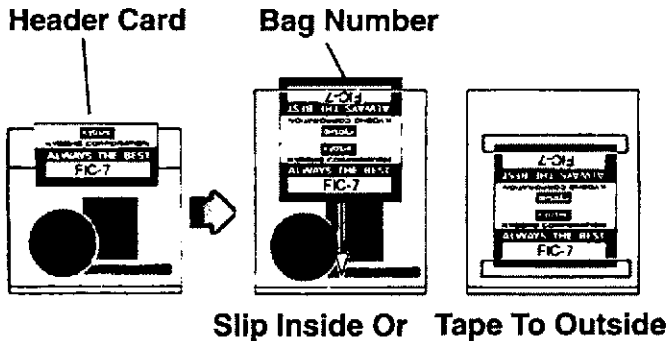
We want your experience at building this model to be a success. So before you remove any parts from their packages and begin assembly:

- Read through the entire manual carefully to make sure that you are thoroughly acquainted with the model and know what you are undertaking.
- If for any reason you think this model may not be for you, **Please Note:** Your hobby dealer cannot accept a model kit for return after assembly has begun. Return it immediately if you have doubts or concerns.

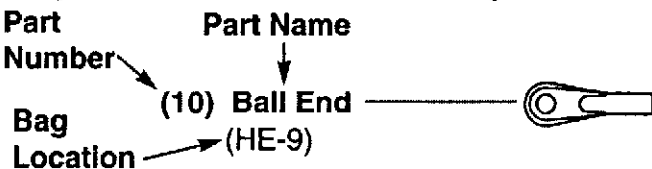
The Kyosho Concept 30 DX is a sophisticated, high-performance gas powered helicopter with many moving parts. Unlike radio-control airplanes, this style kit requires more general maintenance and patience to operate successfully. But if you're ready for fast, exciting flying... and welcome the chance to know your helicopter inside and out, you're ready for the Kyosho Concept 30 DX.

DON'T LOSE YOUR PARTS

This Kyosho instruction manual uses a cross reference system to help you locate all of the bagged parts. DO NOT open each bag and dump out the parts. Carefully remove the header card from the bag and discard the staple. Slip the header card into the bag or tape it to the outside of the bag so that the bag number shows. On pages 35 and 36 is a list of what is in each bag. These bag numbers will prove invaluable when locating parts.



In each step of assembly each part will be labeled with 1) The part number, 2) Part name and 3) Bag Location.

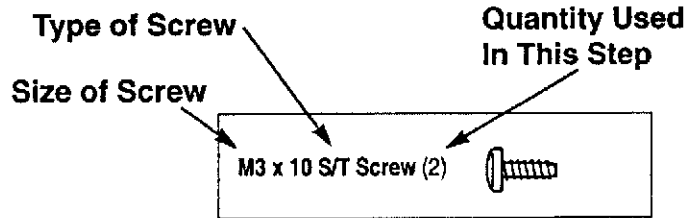


PURCHASING PARTS FOR YOUR KIT

On Pages 30 thru 34 you will find a complete list of replacement and optional parts. If by chance you need to replace a part, consult this guide for manufacturer stock numbers and contents.

FINDING THE SMALL PARTS

In the left margin of each page you will find a directory of small parts that will be used in each step. For ease of identification, these parts are shown actual size enabling you to place a screw directly on the picture to ensure you have selected the appropriate size.



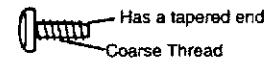
FINDING THE CORRECT SCREWS AND WASHERS IN THIS KIT

All nuts and bolts used throughout this kit are metric size. Therefore, some of the notations may not be familiar to you. An M3 nut is a 3 millimeter (3mm) nut. An M3 x 15 screw is 3mm in diameter and 15mm long. Some round parts may be labeled as a "M4 Washer" (a washer with a 4mm inside diameter) or a "3mm Bushing" (a bushing with a 3mm inside diameter). At various points throughout the manual these parts are labeled and pictured in their actual size on the left hand side of the page. For your reference, 1 millimeter equals approximately .039 inches. Also on page 10 a metric ruler is provided.



A few different types of screws are used in the construction of your model. Here are some examples and how they will be indicated in the instructions for example, Self Tapping will simply be S/T screw.

Self Tapping (S/T)



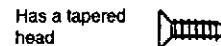
A self tapping screw has a coarse thread and is used to screw into plastic. Be careful not to tighten the screw too much. This may strip the plastic.

Screw



Screws have a fine thread and are used with nuts most of the time. They are for high stress joints where strength is required.

Flat Head Screw (F/H)



Flat head screws have a fine thread and a tapered head. This allows the head of the screw to be flush with the part it is holding so that the screw does not catch on anything.

Set Screw



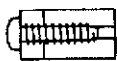
Set Screws have a socket head that takes a hex wrench in order to turn. These are for areas that require tight joints where normal screws may strip out.

HELPFUL HINTS

Some precautions need to be observed when building your Kyosho kit to avoid problems:

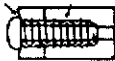
- 1.) Take your time and read the instruction manual thoroughly. It's not how fast you can assemble the kit but how well it flies once it is assembled.
- 2.) Try to avoid working over a shag carpet. In the event that a small part or screw should fall onto the carpet, it will be difficult to find.
- 3.) Place a mat or towel on the work surface where you will be building the kit. This will prevent parts from rolling off and will protect the work surface at the same time.
- 4.) Use a muffin tin or egg carton to separate screws, nuts, washers, etc. This will make it easier to locate the correct part.
- 5.) **WARNING: Avoid getting products like motor cleaner or screw lock (Loctite, Zap-Lock) on the plastic parts. They can melt the plastic which will damage the model.**
- 6.) Avoid flying the helicopter in very cold temperatures. Both plastic and metal parts become brittle at low temperatures. In addition, grease, oil and fuel become thick causing premature wear and deficient performance.
- 7.) Remove all flashing from parts before assembly.
- 8.) Trial fit all parts to ensure proper fit before attaching them permanently.
- 9.) Do not use excessive force when tightening self tapping type screws into plastic. Overtightening will cause the threaded portion of the plastic to strip. It is recommended to stop tightening when some resistance is felt after the threaded portion enters the plastic.

CORRECT



INCORRECT

Threads Stripped



- 10.) **IMPORTANT:** Note the Grease and Screw cement symbol throughout the manual and apply where shown.
- 11.) Avoid using power screwdrivers when assembling your kit. They tend to overtighten screws.
- 12.) **IMPORTANT:** The Control Rods and Ball Ends have the word "Kyosho" on them. The "Kyosho" must face outward.

HOBBICO HELICOPTER SUPPORT & SERVICE LINE

217-398-2834

Our knowledgeable technical staff is available to answer all your questions through our Helicopter Support and Service Line. If you have any questions on setting up your Concept 30 DX, or encounter problems during assembly, give us a call weekdays between 9:00 a.m. and 5:00 p.m. CST.

SPECIAL SYMBOLS YOU WILL SEE

Certain symbols are used throughout the instructions. Pay attention to their location.



Points where Grease should be applied.



Points where Screw Cement must be used.

REQUIRED TOOLS

THESE ARE INCLUDED IN THE KIT.

Hex Wrench Set



Grease



Screw Cement



Plug Wrench



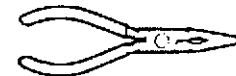
THESE ARE NOT INCLUDED IN THE KIT.

Drill and small drill bit set.

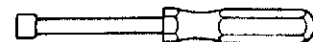
Hobby Knife (XACR4320)



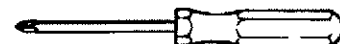
Needle Nose Pliers (XACR2680)



5mm and 10mm Nut Driver (KYOC6390)



Phillips Screwdriver



WARRANTY INFORMATION

WHAT THE CONCEPT 30 DX WARRANTY MEANS TO YOU

- For 90 days after you purchase your Concept 30 DX, Kyosho will either repair or replace, at no charge, any incorrectly made part.
- Make sure you **SAVE THE RECEIPT OR INVOICE** you were given when you bought your model! It's your proof of purchase - and we must see it before we can honor the warranty.
- To send your Concept 30 DX in for repairs covered under warranty, you should send your helicopter to Kyosho's authorized U.S. repair facility:

Hobby Services
1610 Interstate Drive
Champaign, Illinois 61821
Attn. Service Department
Phone: (217) 398-0007

- For details on your return, be sure to follow steps 1-4 under the "Repair Service Available Anytime" section.

Limit of our Liability:

Our liability under this warranty is limited to the repair or replacement of defective parts by Hobby Services and does not include cost of shipping to us. Hobby Services does pay the shipping expense to return warranty items to you.

Exclusion and/or Voidance of Warranty:

This warranty does not apply to damage or defects resulting from misuse, abnormal service, damage in shipment or damage resulting from a crash. The warranty is voided if the model is modified, altered, or repaired by anyone other than Hobby Services. This warranty gives you specific legal rights, and you may have other rights that vary from state to state within the U.S. We are sorry, but we cannot be responsible for crash damage and/or resulting loss of kits, engines, accessories, etc.

REPAIR SERVICE AVAILABLE ANYTIME

- After the 90-day warranty has expired, you can still have your Concept 30 DX repaired for a small charge by the experts at Kyosho's authorized U.S. repair facility.

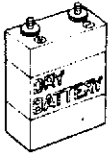
Hobby Services
1610 Interstate Drive
Champaign, Illinois 61821
Attn. Service Department
Phone: (217) 398-0007

- To speed up the repair process, please follow the instructions listed below:
 - 1.) Under all circumstances, return the **ENTIRE** system: Car and Radio.
 - 2.) Disconnect the receiver battery switch harness, and make sure the transmitter is turned off. Make sure all batteries are disconnected and any fuel drained.
 - 3.) Send written instructions which include: a list of all items returned, a **THOROUGH** explanation of the problem and the service needed, and your phone number where you can be reached during the day. If you expect your repair to be covered under warranty, be sure to include proof of date of purchase (your store receipt or purchase invoice).
 - 4.) Also include your full return address.

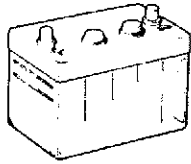
Repair charges and postage may be prepaid or billed C.O.D. Additional postage charges will be applied for non-warranty returns. All repairs shipped outside the United States must be prepaid in U.S. funds only.

PARTS NEEDED TO COMPLETE THIS KIT

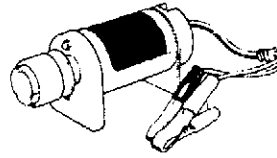
4 or 5 Channel Radio
(Helicopter Type Recommended)
 (FUTK10** 5NLH With 4-S148 Servos)
 (KYOJ50** Advance 6-Channel Helicopter
 Radio With 5-Servos and 1000 mAh
 Receiver Battery)



1.5 Battery
 (For Glow Plug)
 (EVEP 1270)



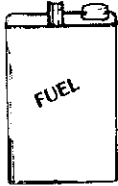
12V Starter Battery (HCAP0800)



Starter (HCAP3200)



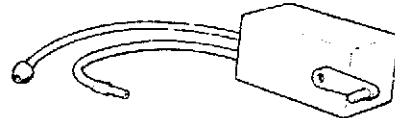
Fuel Filter(SULQ2387)



10-15% Glow Fuel (COOP1112)



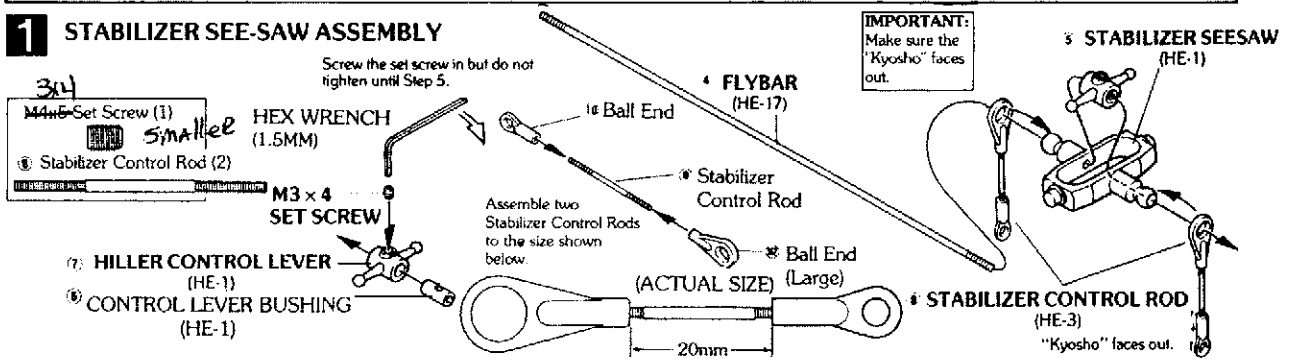
Glow Plug Clip (HCAP2500)



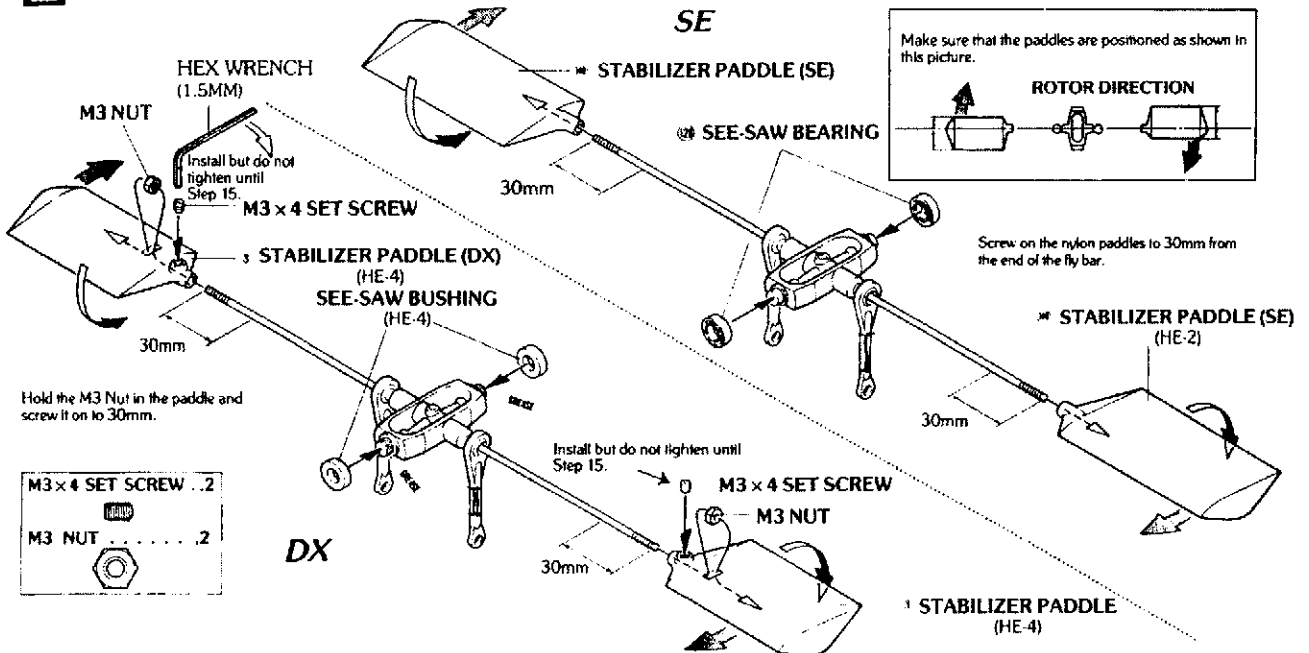
Fuel Pump (HCAP3010)

ASSEMBLY STEPS (ASSEMBLE ALL STEPS IN ORDER AS SHOWN)

1 STABILIZER SEE-SAW ASSEMBLY

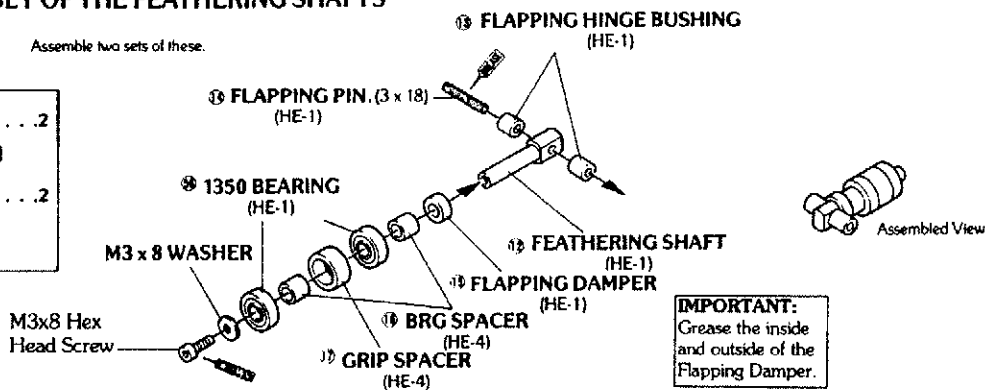
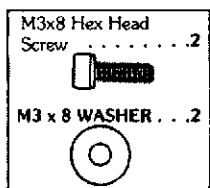


2 INSTALLATION OF THE STABILIZER PADDLES

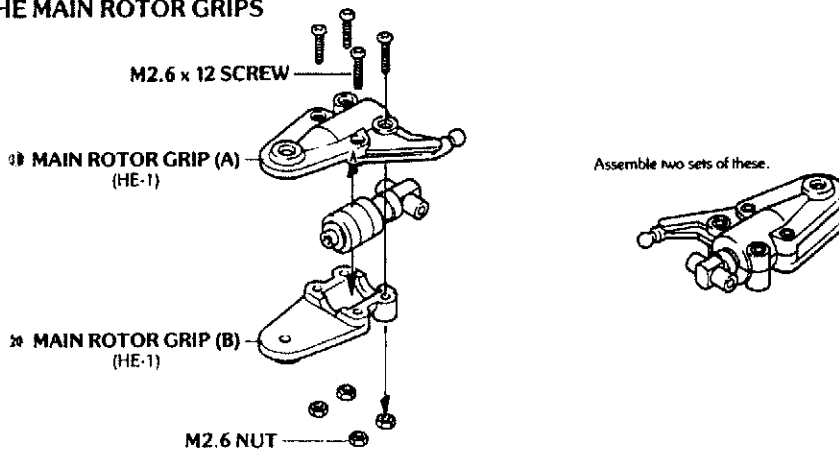
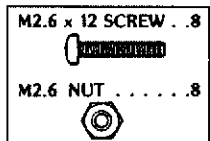


3 ASSEMBLY OF THE FEATHERING SHAFTS

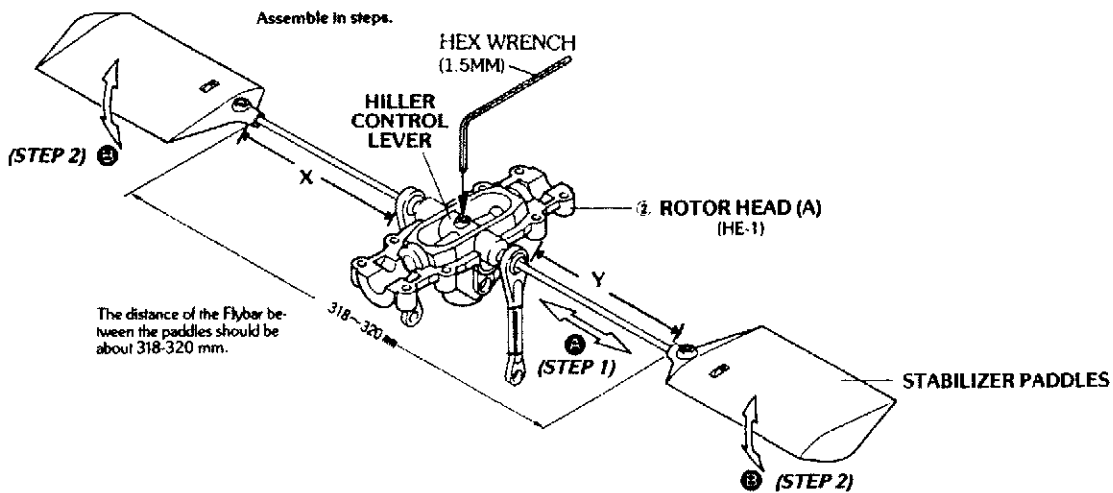
Assemble two sets of these.



4 ASSEMBLY OF THE MAIN ROTOR GRIPS

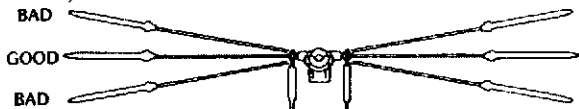


5 INSTALLING ROTOR HEAD (A)



Step 1 •

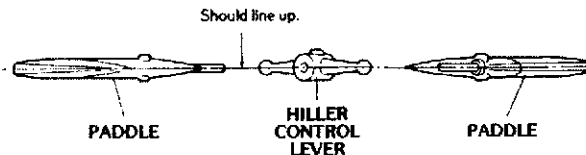
Move the Flybar so distances (X) and (Y) are equal. Then tighten the center set screw. Hold onto the Rotor Head (A) and balance the Flybar.



Make sure that the Flybar is horizontal. If not, balance it using decals or tape on the higher paddle.

Step 2 •

Make sure that both Stabilizer Paddles and the Hiller Control Lever are lined up in the same plane as shown.



6 ROTOR HEAD COMPLETION

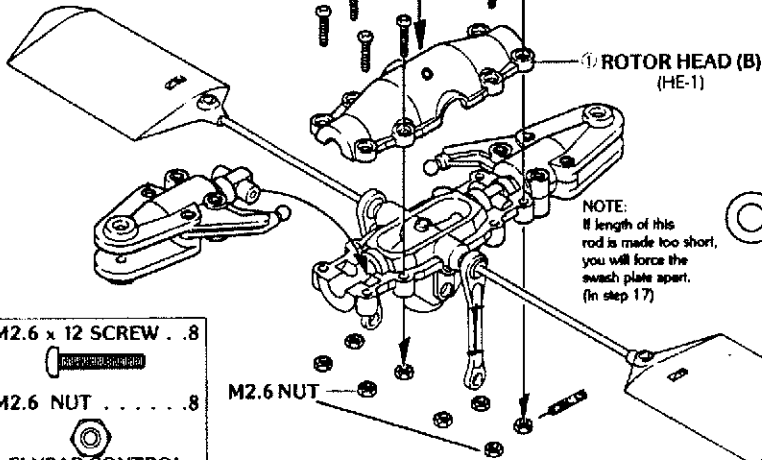
You may drill a small hole here to access M3x4 set screw for easier stabilizer bar removal.

Step 2

Step 1

Install Rotor Head (B).

M2.6 x 12 SCREW



NOTE:
If length of this rod is made too short, you will force the wash plate apart. (In step 17)

IMPORTANT:
Make sure the "Kyosho" faces out.

RIGHT WRONG

19 BALL END (HE-3)

Assemble two of each rods to the lengths shown below.

20 FLYBAR CONTROL ROD (HE-3)

ACTUAL SIZE

45mm

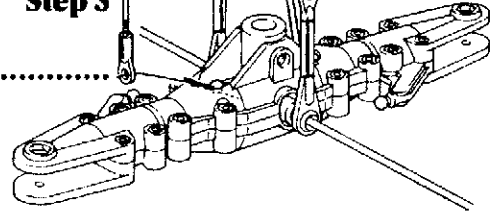
(ACTUAL SIZE)

21 PITCH CONTROL ROD

22mm

22 FLYBAR CONTROL ROD

Step 3



M2.6 x 12 SCREW . . . . .	.8
M2.6 NUT . . . . .	.8
FLYBAR CONTROL ROD . . . . .	.2
PITCH CONTROL ROD . . . . .	.2

7 SWASHPLATE ASSEMBLY

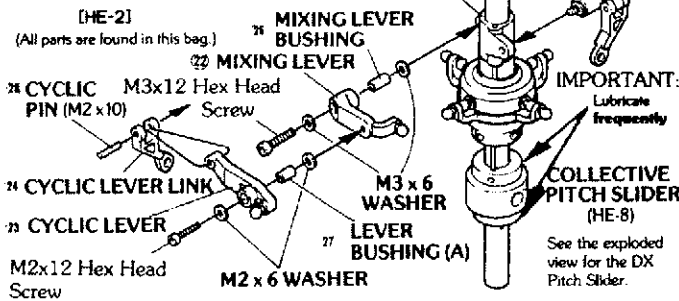
Step 1

M2x12 Hex Head Screw . . . . .	.2
M3x12 Hex Head Screw . . . . .	.2
M2 x 6 WASHER . . . . .	.4
M3 x 6 WASHER . . . . .	.4
MIXING LEVER BUSHING . . . . .	.2
LEVER BUSHING (A) . . . . .	.2
M3x12 Hex Head Screw . . . . .	.4

DX Do not overtighten the Hex Head Screws.

(HE-2)

(All parts are found in this bag.)



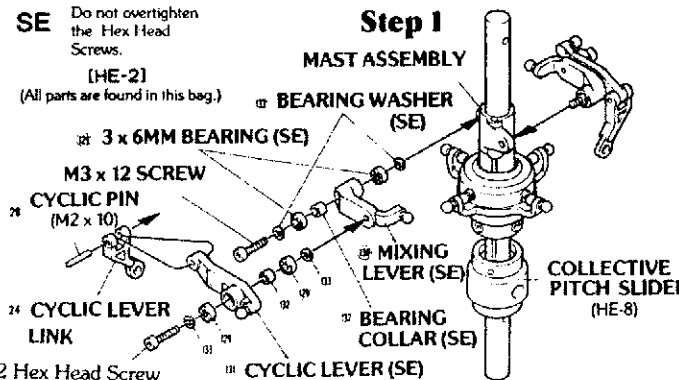
IMPORTANT:
Lubricate frequently

See the exploded view for the DX Pitch Slider.

SE Do not overtighten the Hex Head Screws.

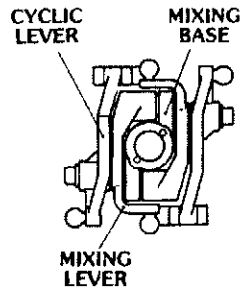
(HE-2)

(All parts are found in this bag.)



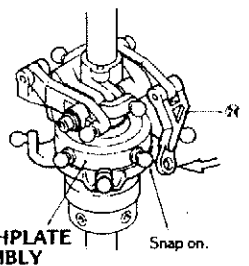
DX • SE (BOTH)

Make sure that all linkages move freely.



Step 2

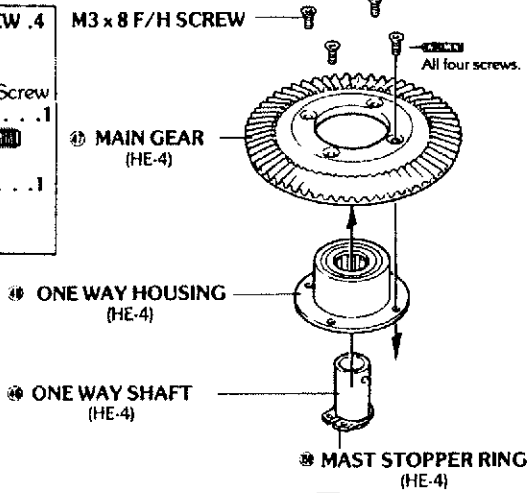
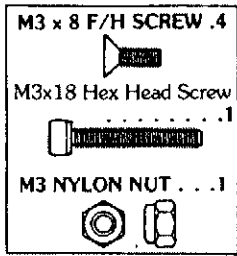
Snap on both sides, part #24 as shown.



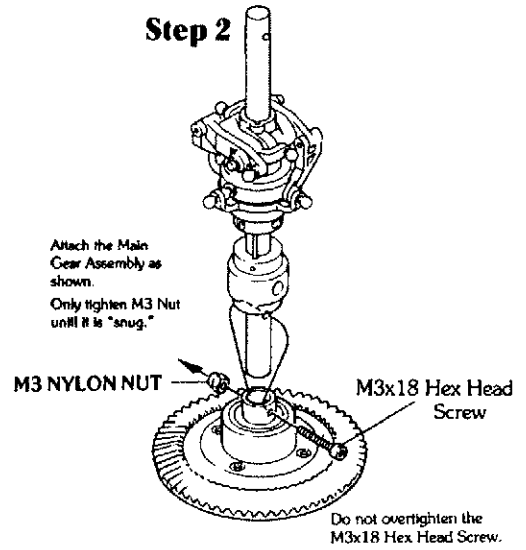
SWASHPLATE ASSEMBLY

Snap on.

8 MAIN GEAR INSTALLATION

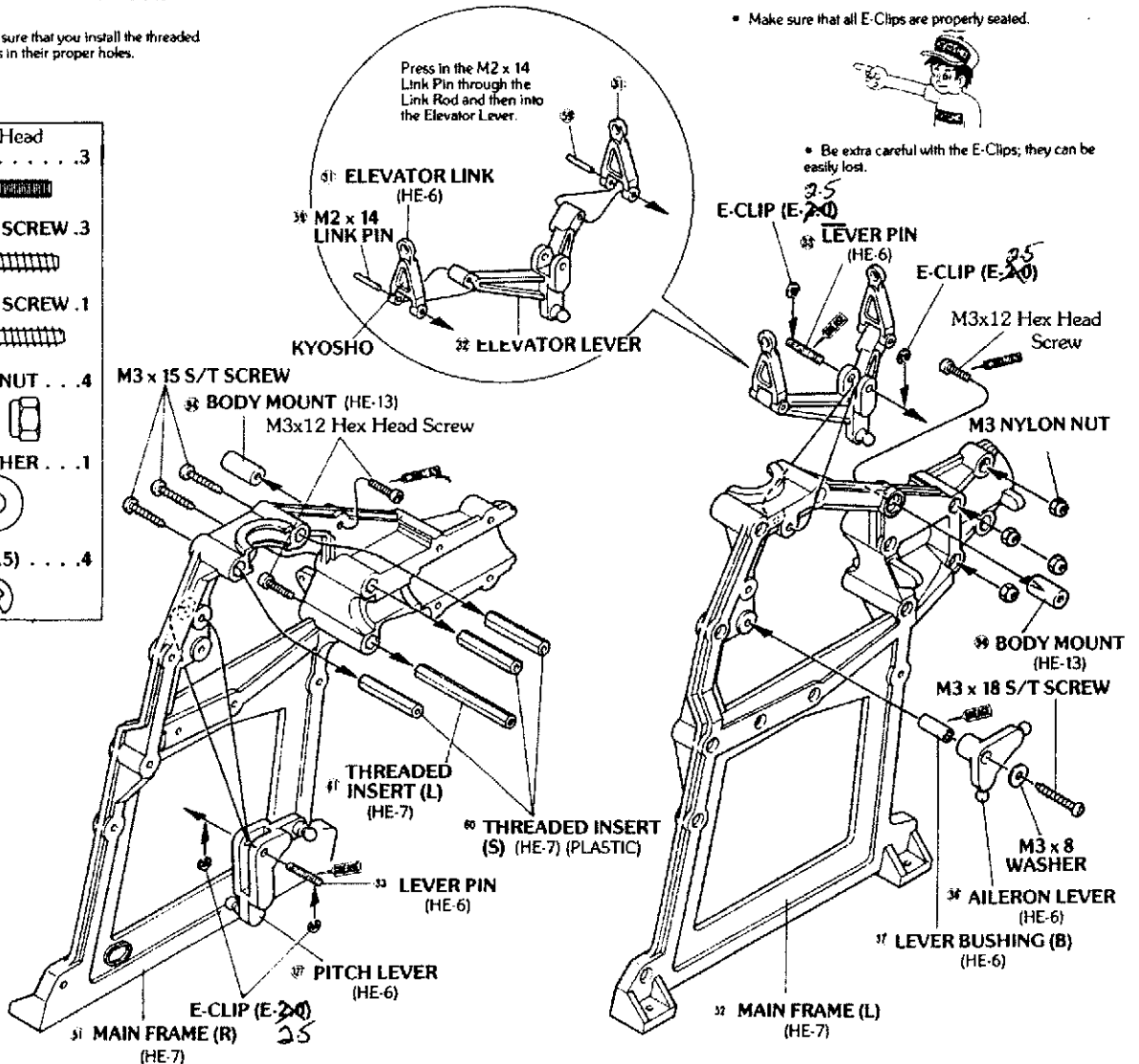
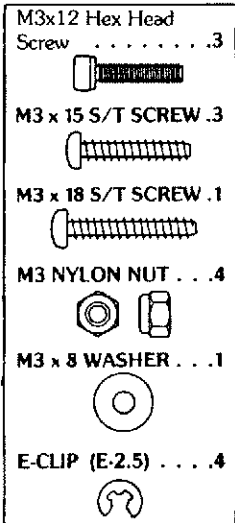


Step 2



9 MAIN FRAME ASSEMBLY

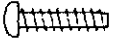
Make sure that you install the threaded Inserts in their proper holes.



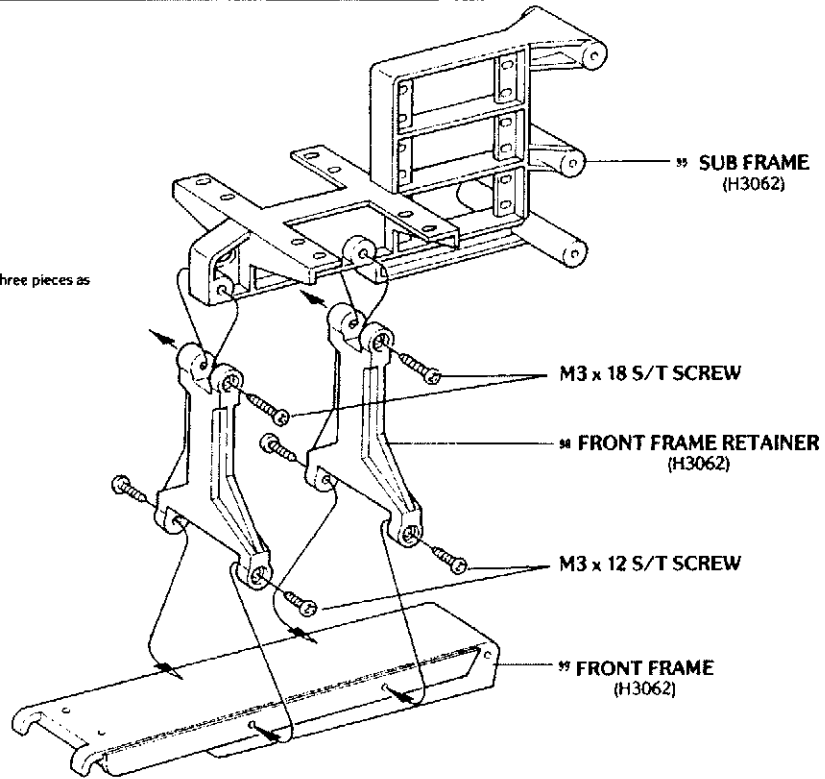
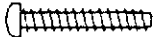
10 FRAME ASSEMBLY

Assemble the three pieces as shown.

M3 x 12 S/T SCREW .4



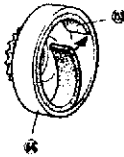
M3 x 18 S/T SCREW .2



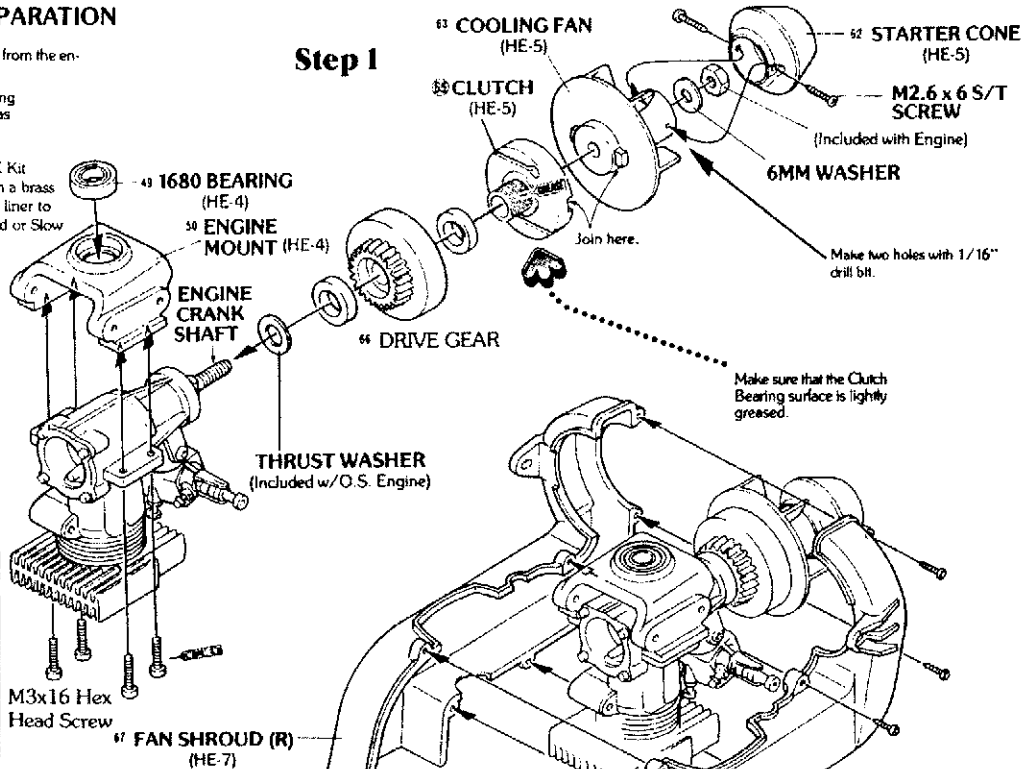
11 ENGINE PREPARATION

Remove Drive Washer from the engine. It is not needed.
Install the clutch, cooling fan, starter cone, etc.. as shown at right.

The updated Concept 30 DX Kit comes with a Drive Gear with a brass ring and fiber liner. Glue the liner to the Drive Gear with J.B. Weld or Slow Cure Epoxy only.



Step 1



M2.6 x 6 S/T SCREW 2



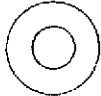
M2.6 x 10 S/T SCREW 6



M3x16 Hex Head Screw .4



6MM WASHER . . . 1



M3x16 Hex Head Screw

67 FAN SHROUD (R) (HE-7)

Before tightening clutch/fan assembly onto crankshaft, remove glo plug and full combustion chamber with oil. Replace glo plug and now tighten clutch onto engine.

Now remove oil and tighten prop nut/washer onto clutch/fan.

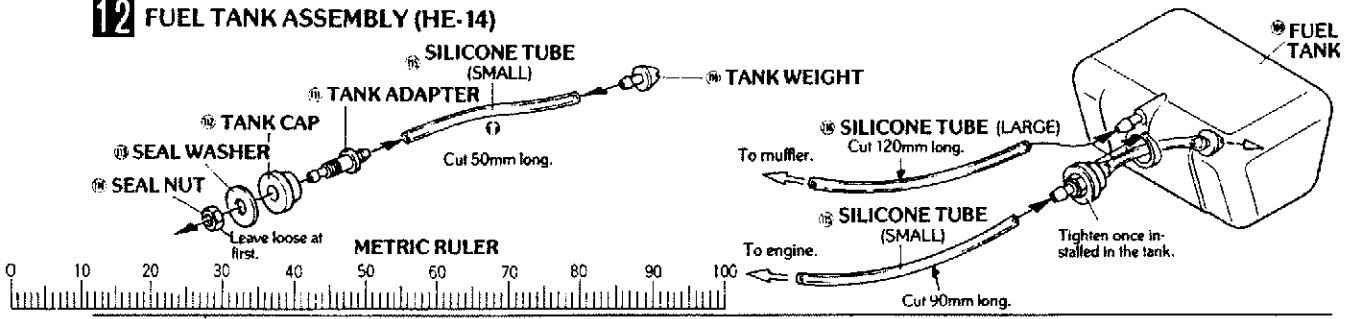
Step 2

Install Shroud.

68 FAN SHROUD (L) (HE-7)

M2.6 x 10 S/T SCREW

12 FUEL TANK ASSEMBLY (HE-14)

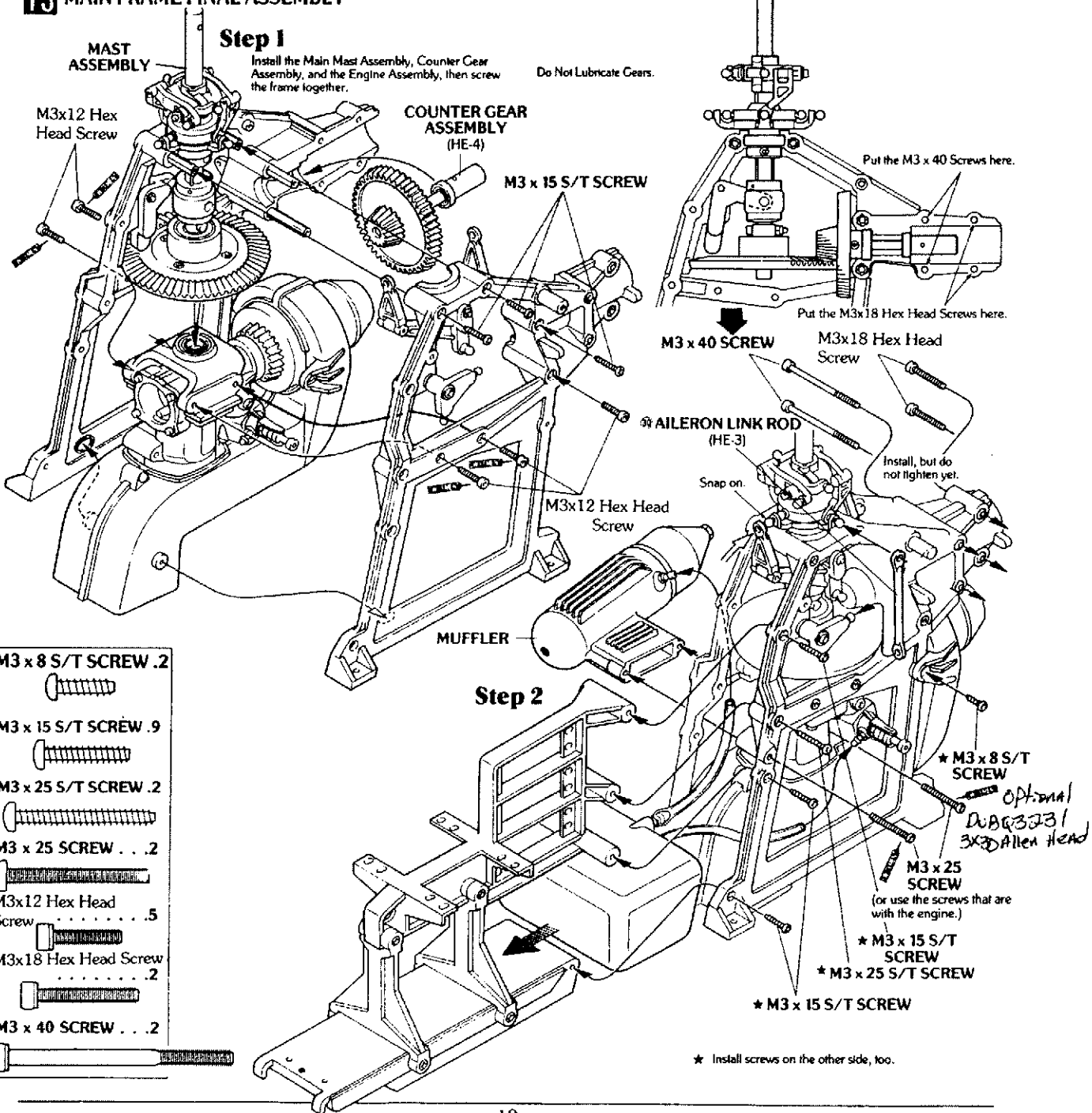


13 MAIN FRAME FINAL ASSEMBLY

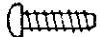
Step 1

Install the Main Mast Assembly, Counter Gear Assembly, and the Engine Assembly, then screw the frame together.

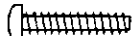
Do Not Lubricate Gears.



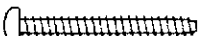
M3 x 8 S/T SCREW .2



M3 x 15 S/T SCREW .9



M3 x 25 S/T SCREW .2



M3 x 25 SCREW . . . 2



M3x12 Hex Head

Screw5

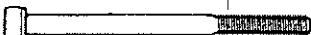


M3x18 Hex Head Screw

.2

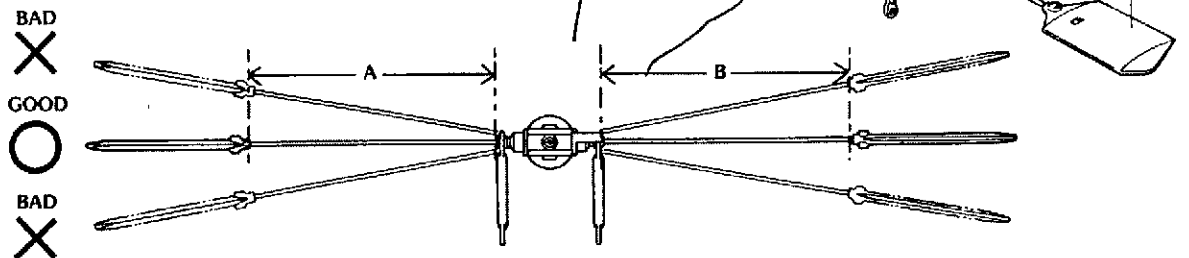


M3 x 40 SCREW . . . 2



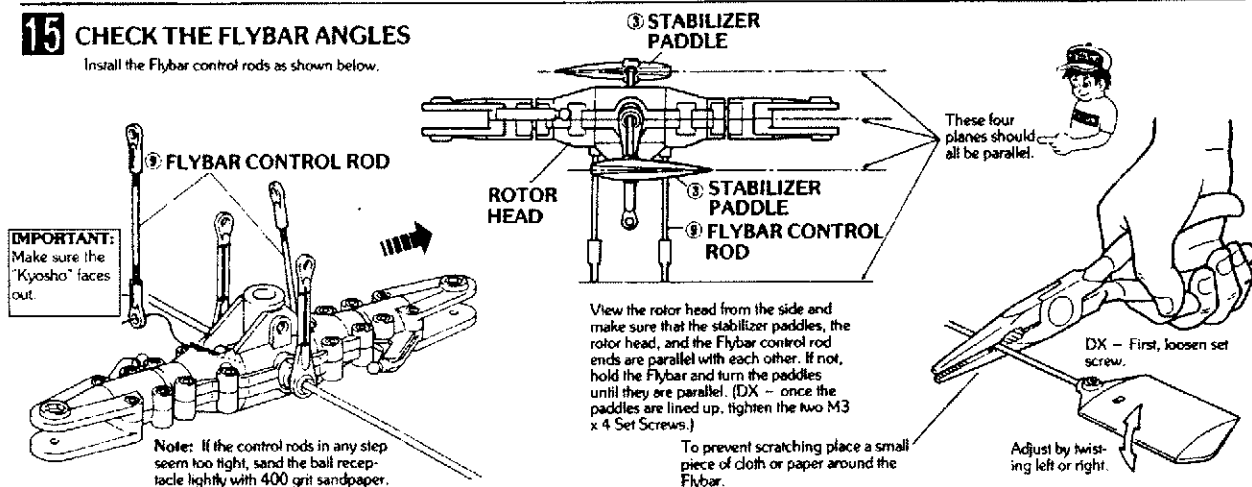
14 CHECK THE STABILIZER BALANCE

Note: Flybar segments A and B should be equal. Hold the rotor head as shown and make sure that the Flybar is horizontal (O). If not (X), balance it using decals or tape on the higher side.

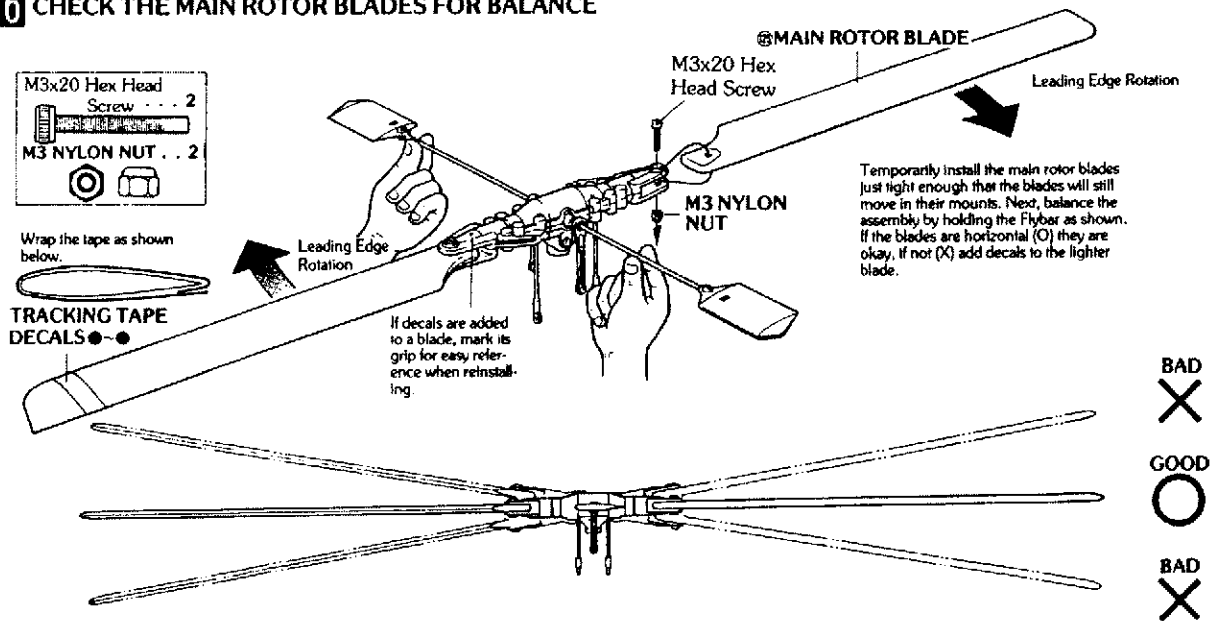


15 CHECK THE FLYBAR ANGLES

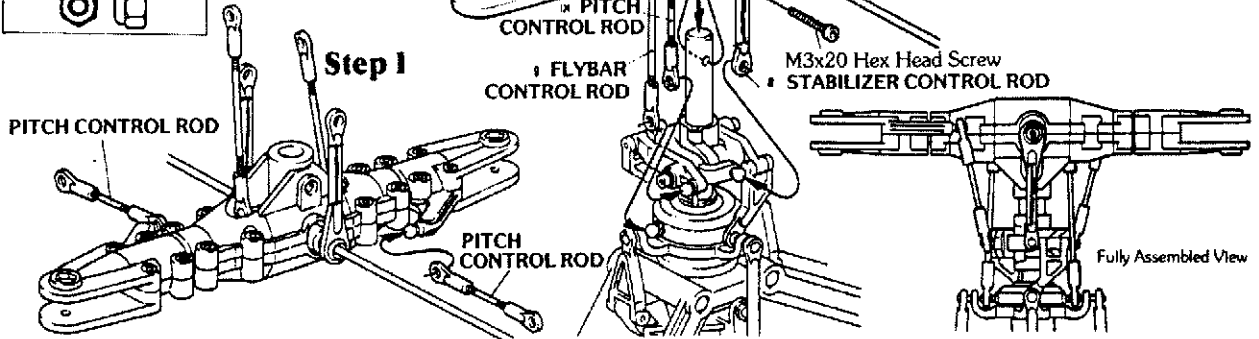
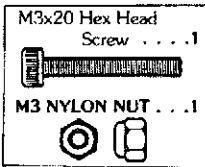
Install the Flybar control rods as shown below.



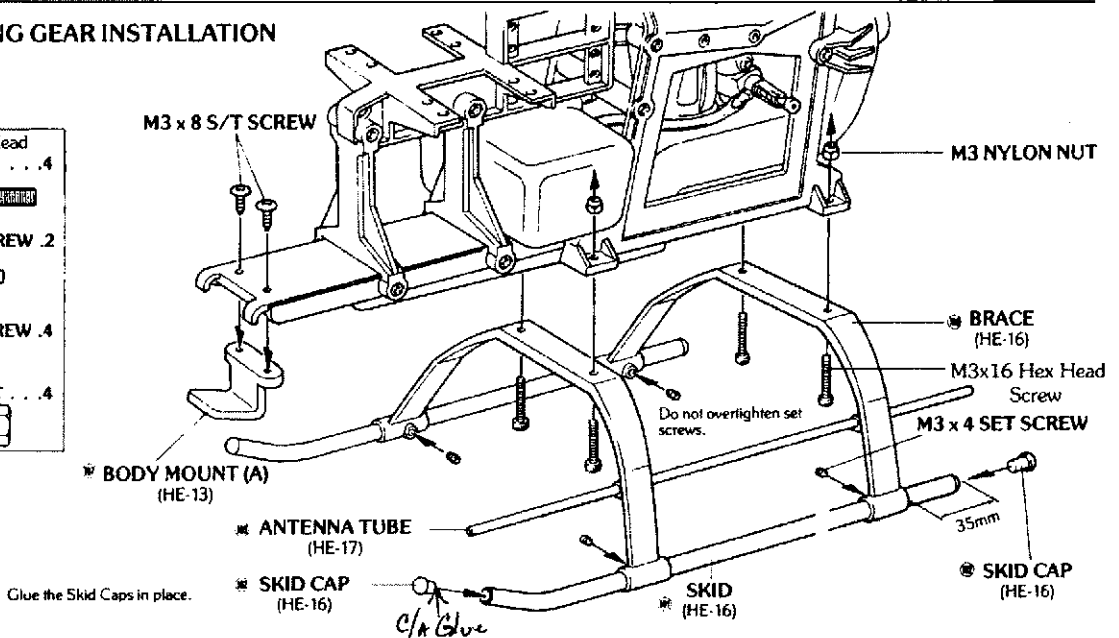
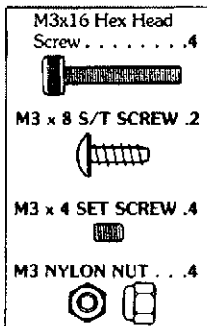
16 CHECK THE MAIN ROTOR BLADES FOR BALANCE



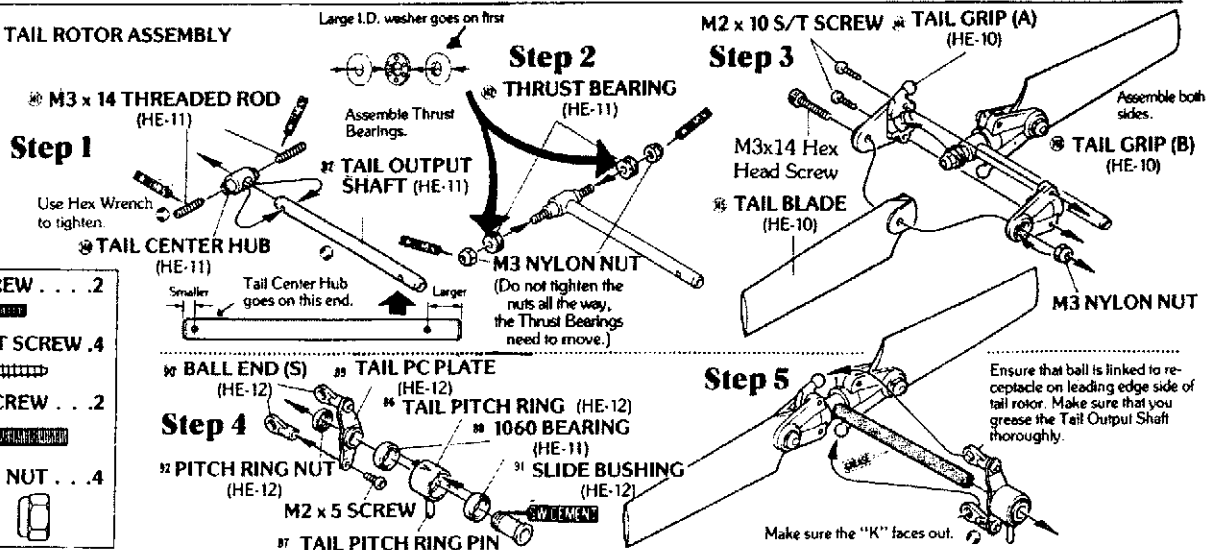
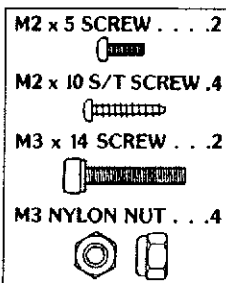
17 ROTOR HEAD INSTALLATION



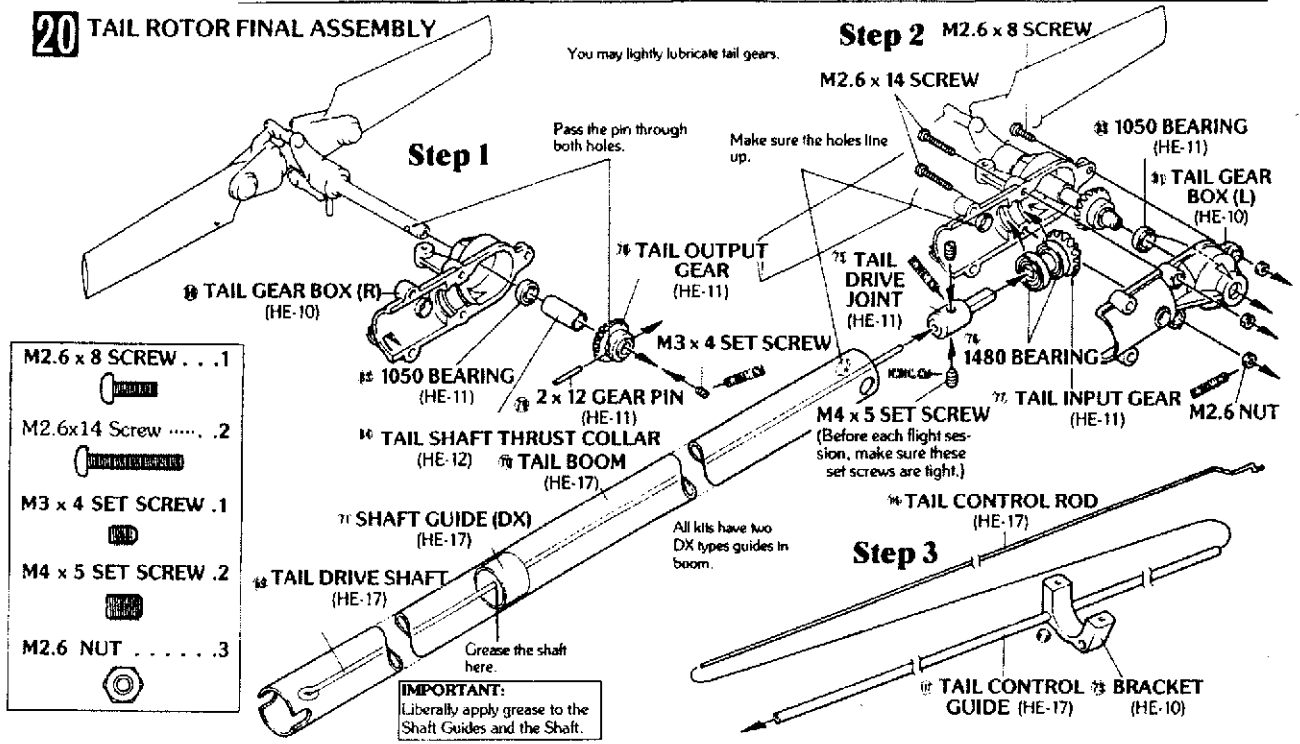
18 LANDING GEAR INSTALLATION



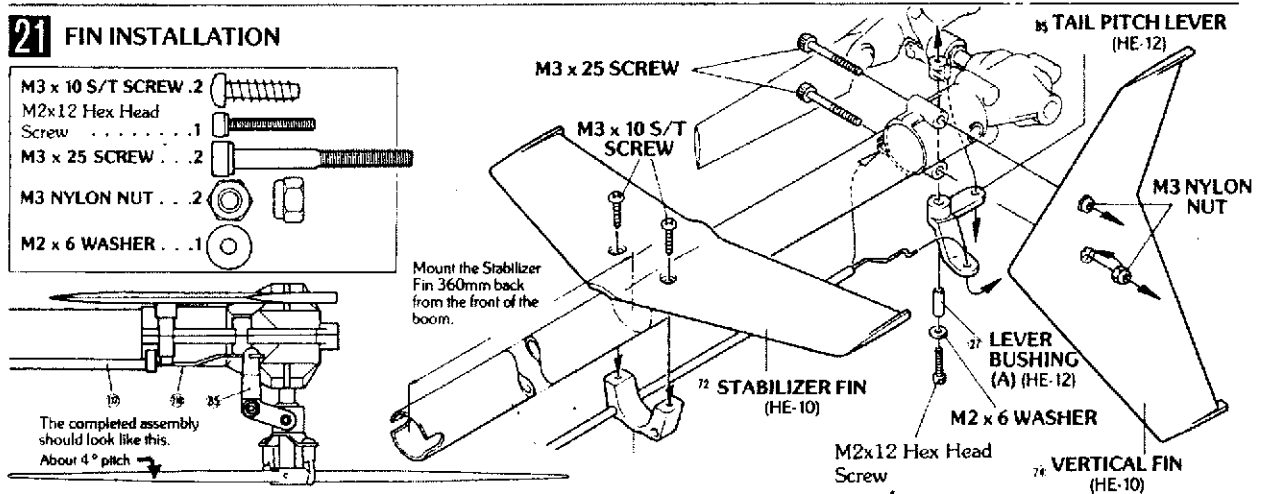
19 TAIL ROTOR ASSEMBLY



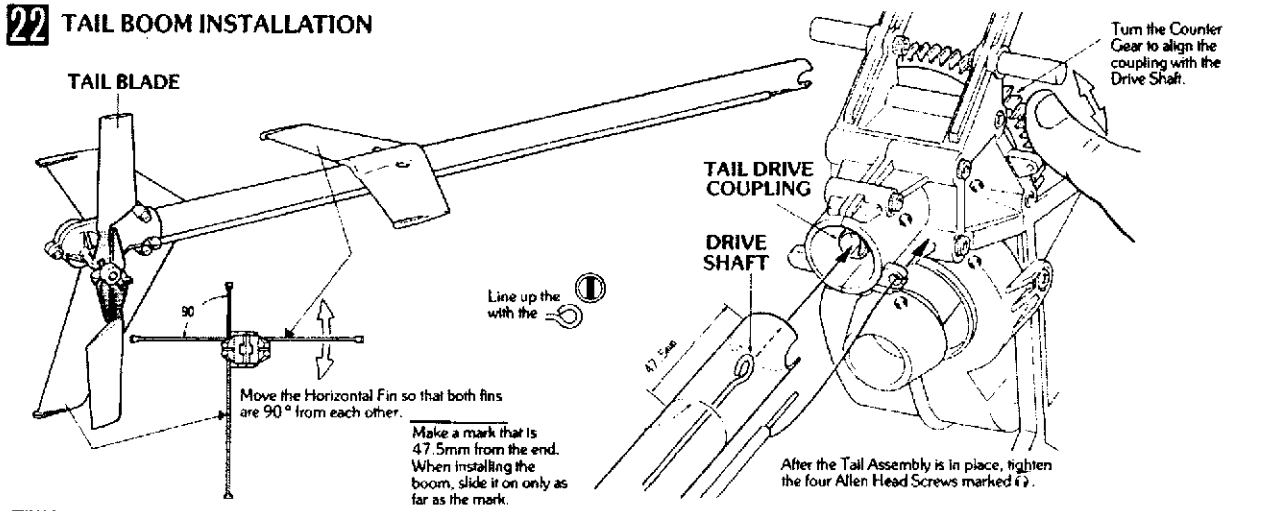
20 TAIL ROTOR FINAL ASSEMBLY



21 FIN INSTALLATION



22 TAIL BOOM INSTALLATION



23 SERVO INSTALLATION

5 SERVO

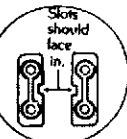
- 5 SERVO
M2.6 x 12 S/T SCREW
(20)
- 4 SERVO
M2.6 x 12 S/T SCREW
(16)

COLLECTIVE
PITCH
SERVO

THROTTLE
SERVO

TAIL ROTOR
SERVO
(RUDDER)

FORE/AFT CYCLIC
SERVO



SERVO MOUNTING
PLATE

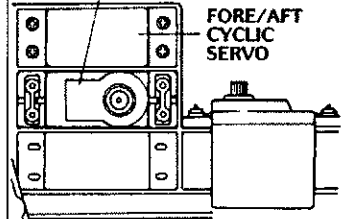
LEFT/RIGHT
CYCLIC SERVO
(AILERON)

Make sure the
servos are facing
the right direction
as shown.

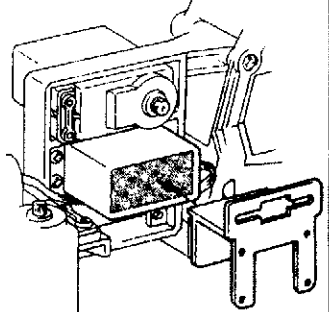
- Be sure to use
the rubber grom-
mets included with
the radio system
(the brass eyelets
are not used).

4 SERVO

In case you use just 4 servos: One servo is used for both the pitch and engine throttle control. Mount in the middle position.



The switch mount is installed behind the pitch/engine servo with Double-Sided Tape as shown.



24 INSTALLATION OF THE RECEIVER/BATTERY/AND OPTIONAL GYRO

Step 1 Cut the double sided tape as indicated (use the ruler below).

SWITCH MOUNT	BATTERY GYRO AMP	RECEIVER	GYRO GYRO	10
30	40	40	40	10

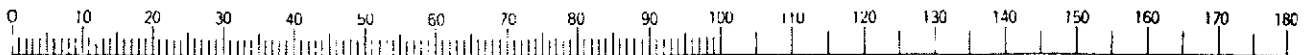
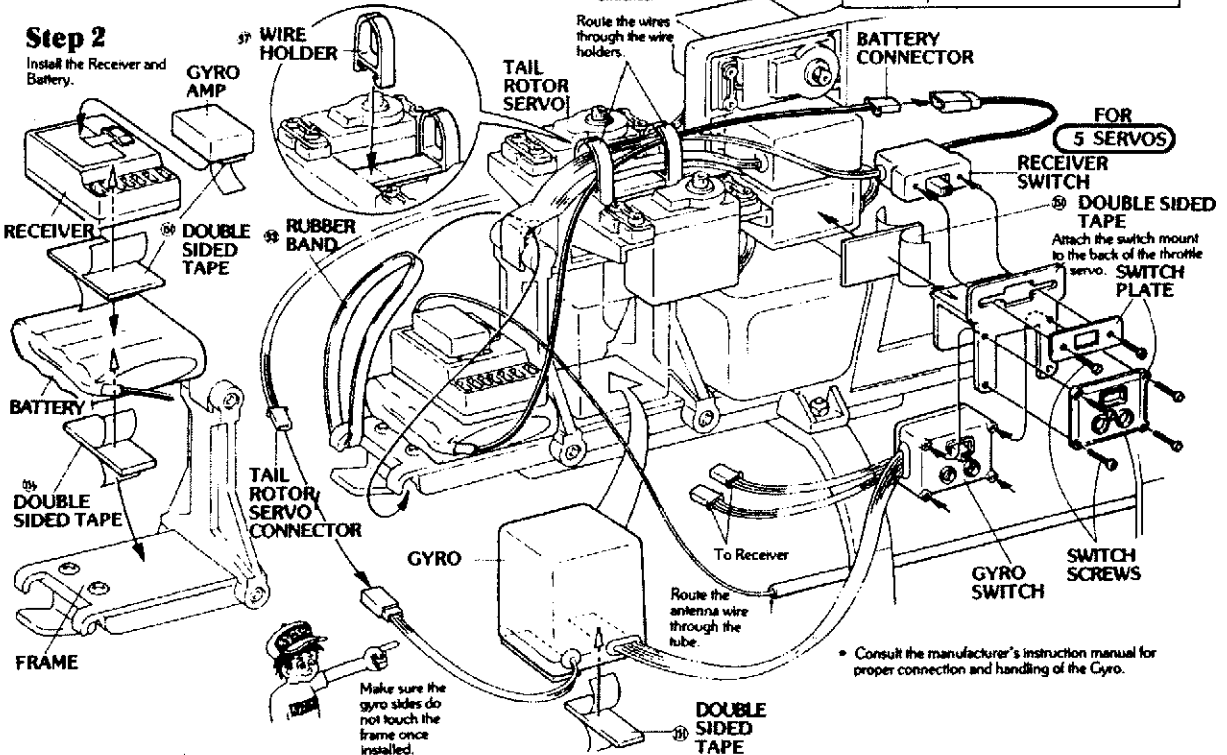
IMPORTANT:
For best crash protection,
wrap the receiver and
receiver battery in soft foam.

Step 3

Mount the Gyro and the
switches.

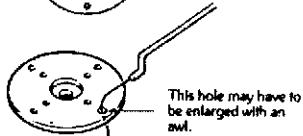
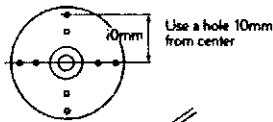
Step 2

Install the Receiver and
Battery.



25 CYCLIC CONTROL ROD INSTALLATION

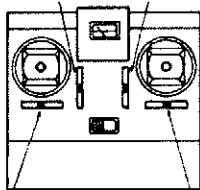
The following applies to steps 25-29.



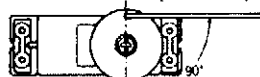
- Turn the radio on.
- With the trims centered and the servos in neutral position, the servo horns should be set to 90° (See below).

THROTTLE TRIM

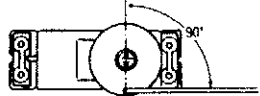
FORE/AFT CYCLIC TRIM (ELEVATOR)



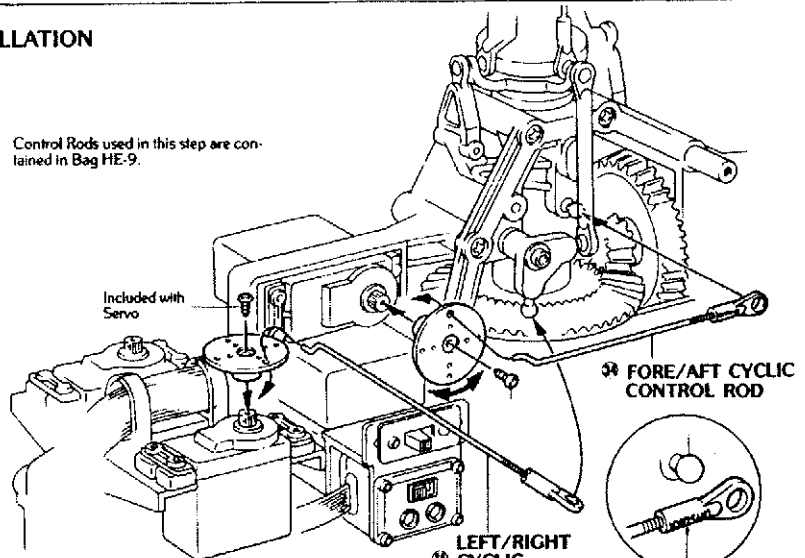
TAIL ROTOR TRIM (RUDDER) LEFT/RIGHT CYCLIC TRIM (AILERON)



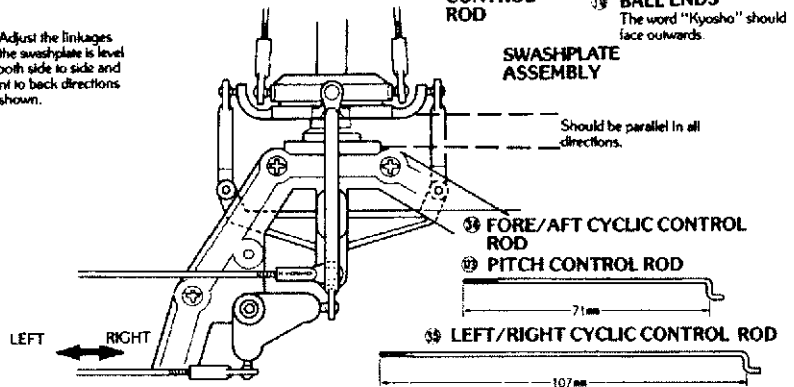
SERVO



Control Rods used in this step are contained in Bag HE-9.

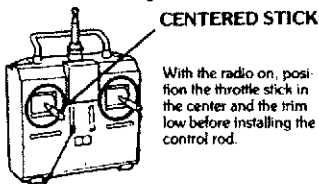


- Adjust the linkages so the swashplate is level in both side to side and front to back directions as shown.



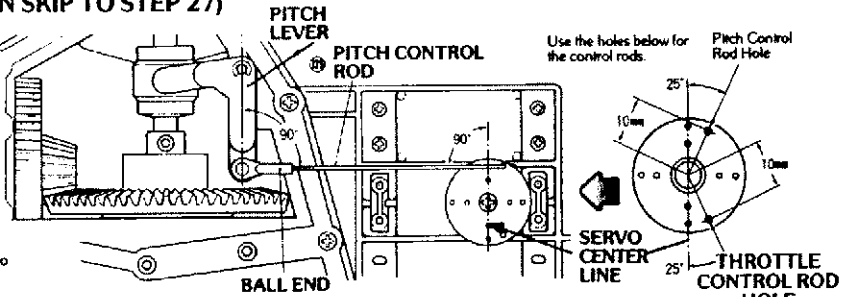
26 THROTTLE AND PITCH CONTROL ROD INSTALLATION (4 SERVO OPERATION) (FOR 5 SERVO OPERATION SKIP TO STEP 27)

1) Pitch Control Linkage

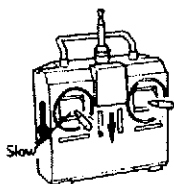


Trim at bottom

- Adjust the ball end so that the pitch lever and the servo center line is 90° to the control rod.

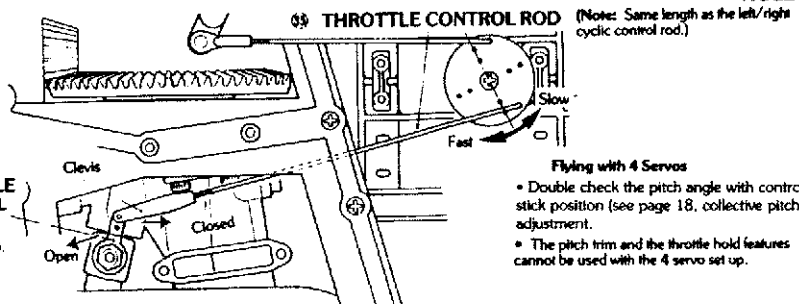


2) Throttle Control Linkage



(Use the O.S. metal carburetor arm).

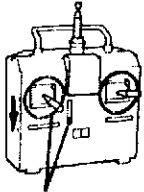
- Adjust the clevis so that the throttle control lever is all the way closed.



Flying with 4 Servos

- Double check the pitch angle with control stick position (see page 18, collective pitch adjustment).
- The pitch trim and the throttle hold features cannot be used with the 4 servo set up.

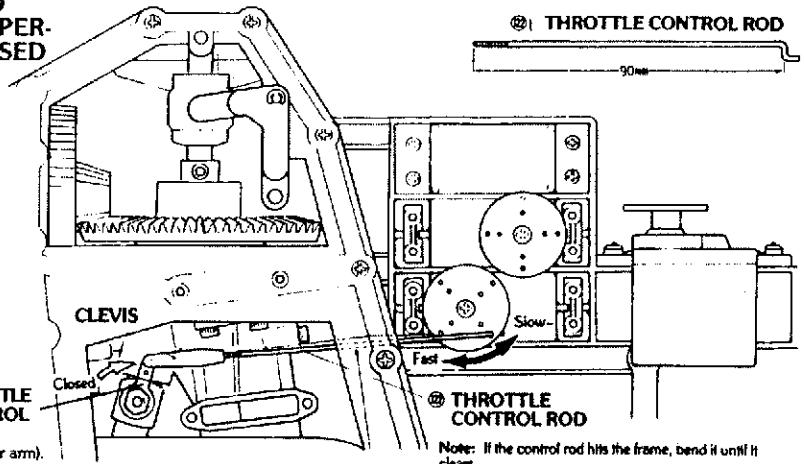
27 THROTTLE CONTROL ROD INSTALLATION 5 SERVO OPERATION (IF 4 SERVOS ARE USED SKIP TO STEP 29)



Position the throttle stick and the trim lever to their lowest settings.

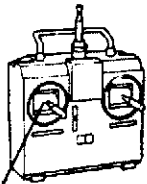
Adjust the Clevis so that the throttle control lever is all the way closed when the throttle stick is down.

(Use the O.S. metal carburetor arm).



Note: If the control rod hits the frame, bend it until it clears.

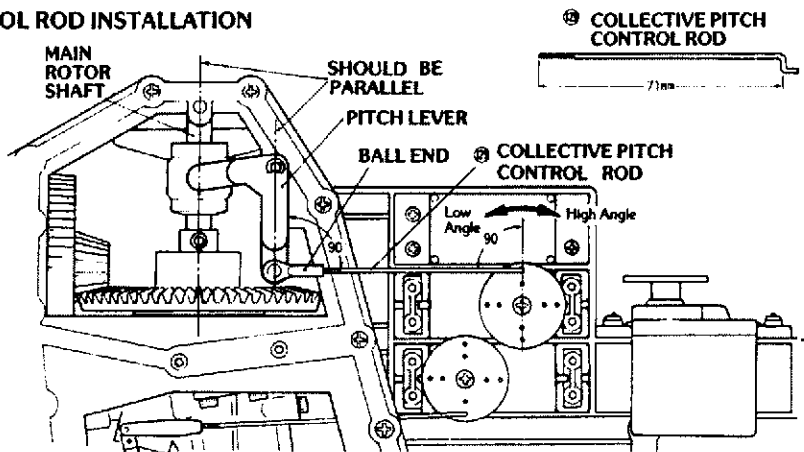
28 COLLECTIVE PITCH CONTROL ROD INSTALLATION (5 SERVO OPERATION)



Move the throttle stick and trim to the center position.

THROTTLE STICK

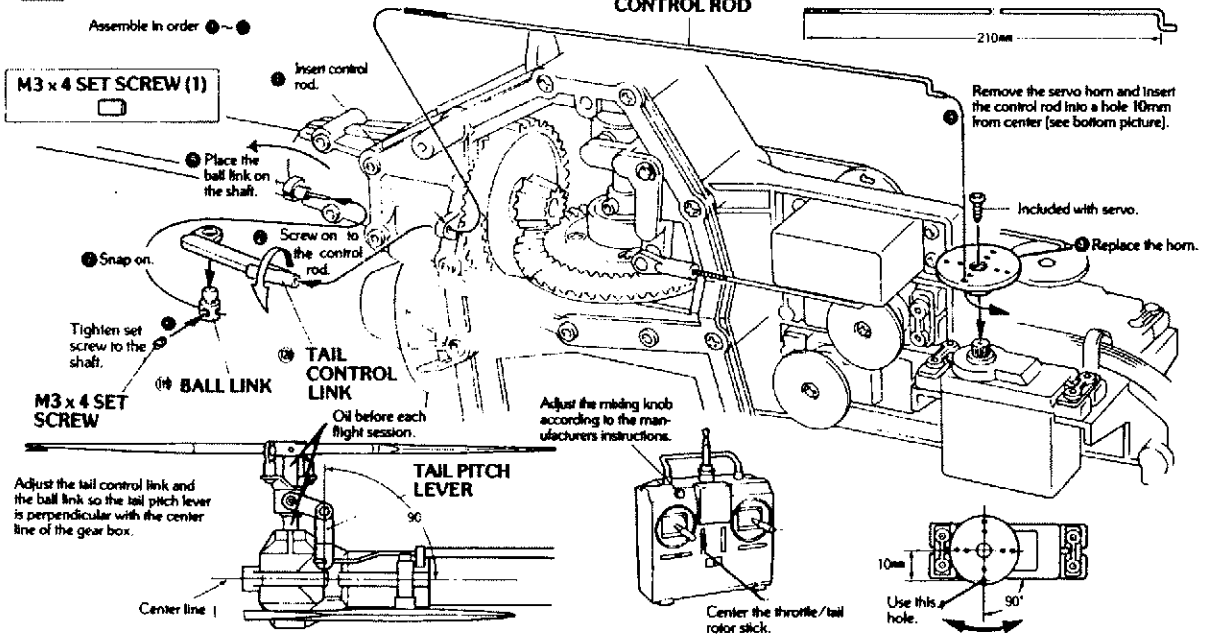
With the throttle in the middle position, adjust the ball end so that the main rotor shaft and the pitch lever are parallel.



29 TAIL ROTOR LINKAGE INSTALLATION

Assemble in order ①-④

① TAIL ROTOR CONTROL ROD

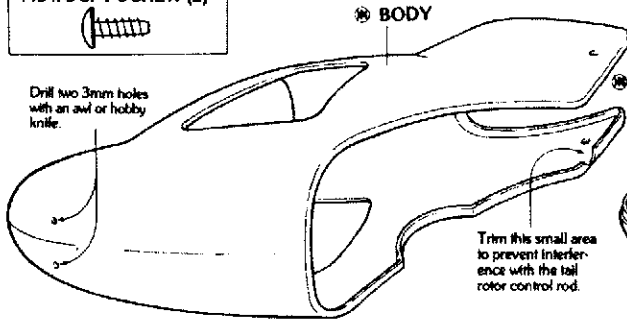


30 INSTALLATION OF THE BODY MOUNT

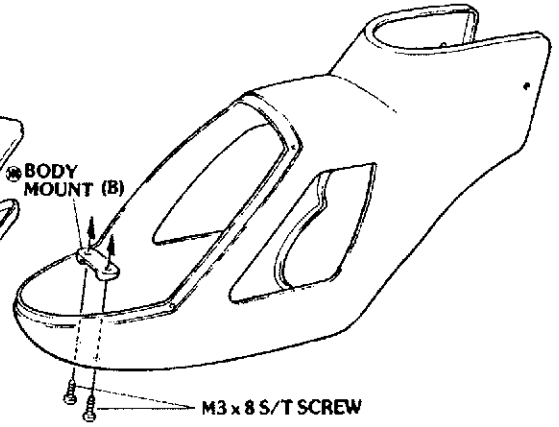
M3 x 8 S/T SCREW (2)



Drill two 3mm holes with an awl or hobby knife.



Trim this small area to prevent interference with the tail rotor control rod.



M3 x 8 S/T SCREW

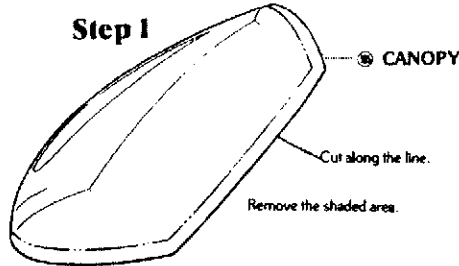
31 INSTALLATION OF THE CANOPY

Assemble in steps 1 to 3.

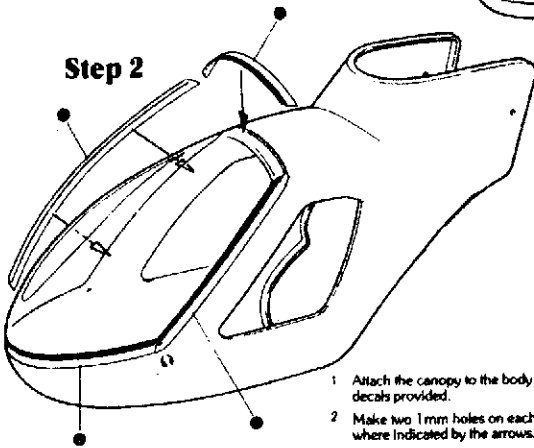
M2 x 5 S/T SCREW (4)



Step 1

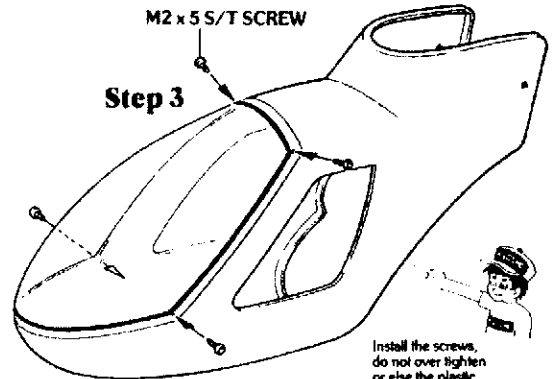


Step 2



- 1 Attach the canopy to the body with the decals provided.
- 2 Make two 1 mm holes on each side where indicated by the arrows.

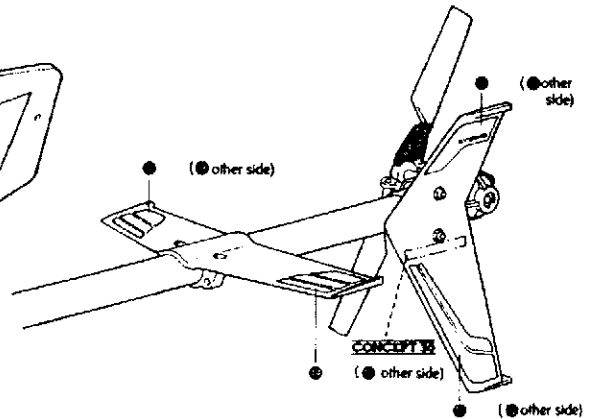
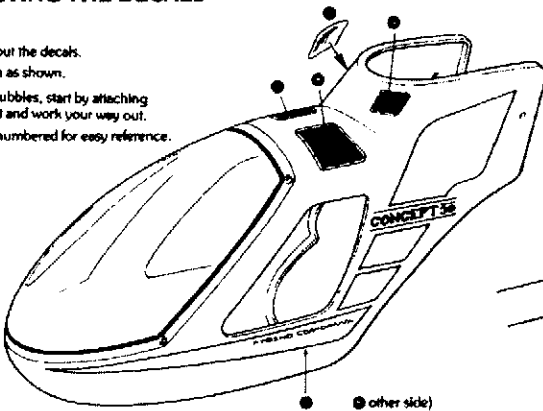
Step 3



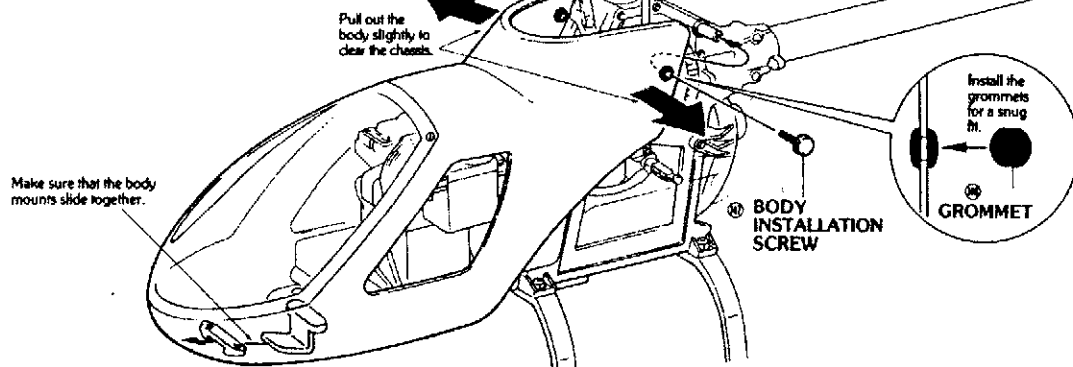
Install the screws, do not over tighten or else the plastic will strip out.

32 APPLYING THE DECALS

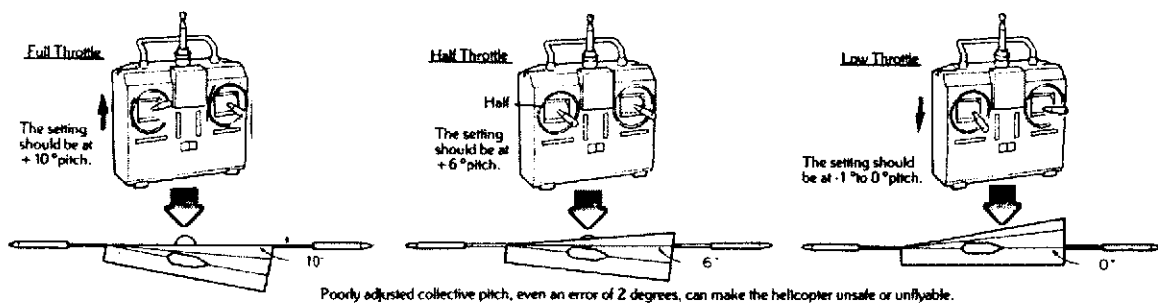
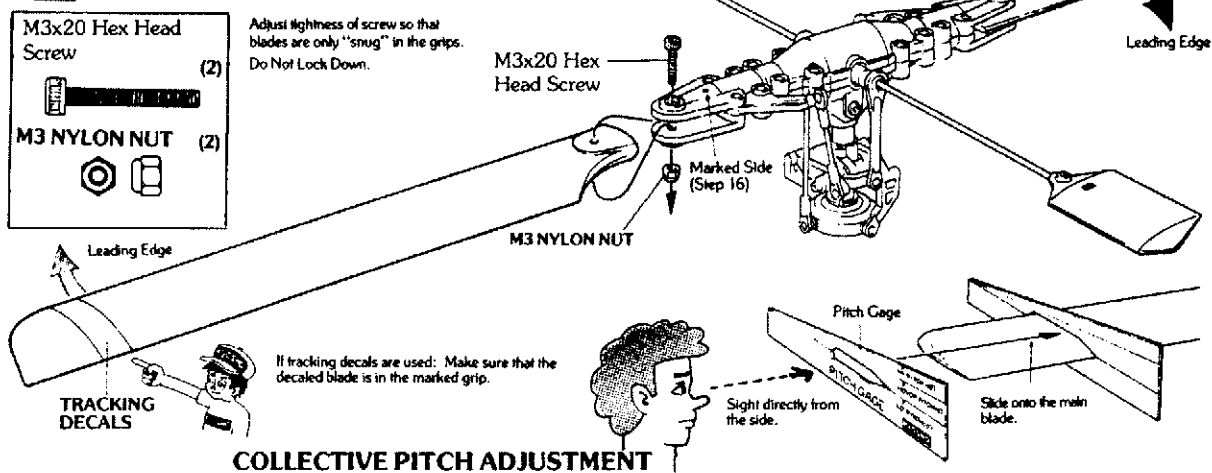
- Carefully cut out the decals.
- Place them on as shown.
- To avoid air bubbles, start by attaching the center first and work your way out.
- All decals are numbered for easy reference.



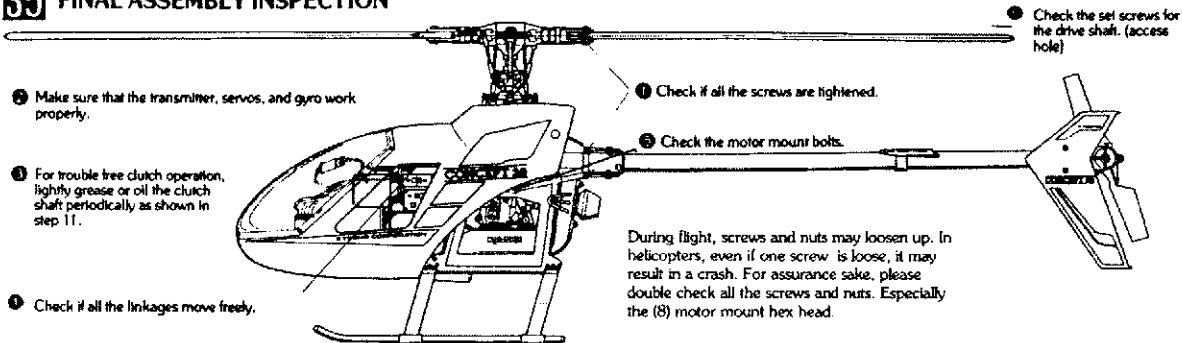
33 INSTALLATION OF THE BODY



34 INSTALLATION OF THE MAIN ROTOR BLADE



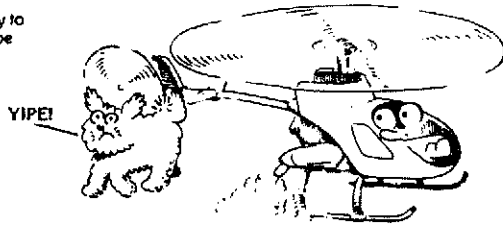
35 FINAL ASSEMBLY INSPECTION



BEFORE FLYING THE CONCEPT 30

Now that you have completed the assembly of the Concept 30, you are ready to go but please be aware that helicopters fly at very high rotor speeds and can be very dangerous. Stay away from any obstacles and enjoy a safe flight.

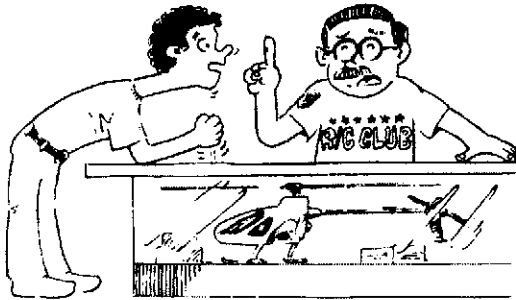
(It is not uncommon for the blade tip velocity to be near 150 mph.)



SHORTCUT TO PROFICIENCY

1. Join the flying club.

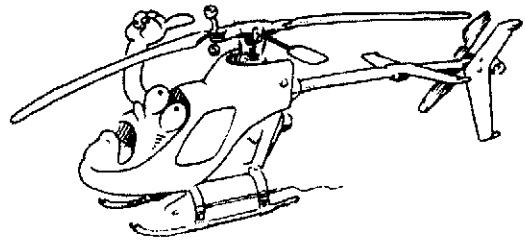
The quickest way to learn helicopter flight is to join a local flying club that has helicopter experts who can help you with flight training and set up.



2. Join the AMA (Academy of Model Aeronautics), 1810 Samuel Morse Drive, Reston, VA 22090. The AMA can provide assistance in locating an R/C club in your area as well as providing liability insurance coverage.

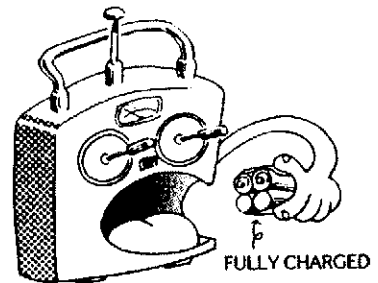
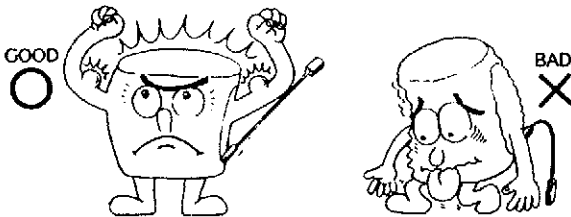
3. Check the entire Helicopter before each flight.

Double check all the screws and nuts to make sure they are secure.



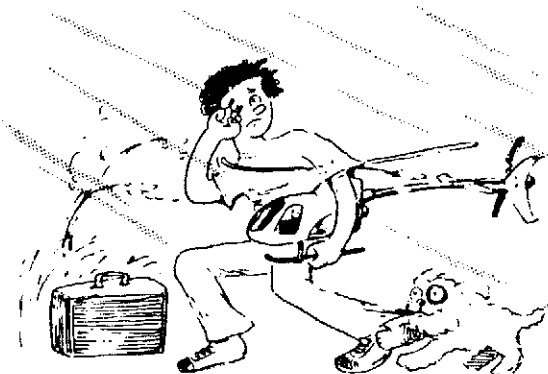
BEFORE GOING TO THE FLYING FIELD

Make sure that the batteries for the transmitter and receiver are both fully charged.

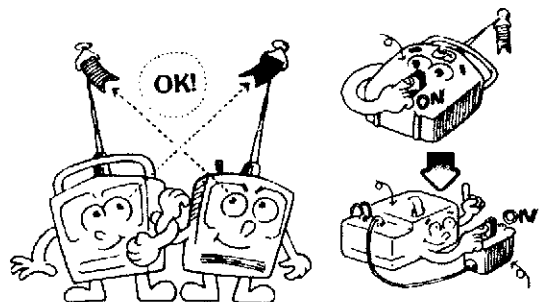


AT THE FLYING FIELD

- If a novice is going to fly, try to avoid strong winds (greater than 10 mph).

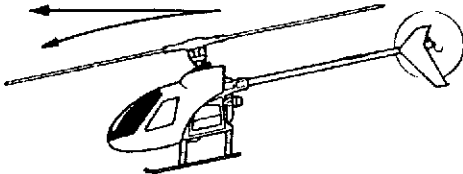
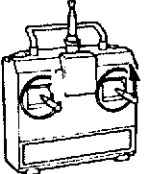
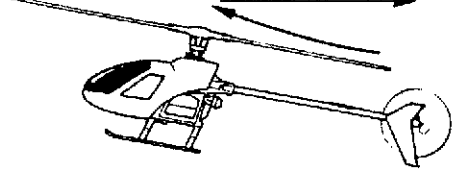
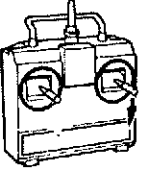
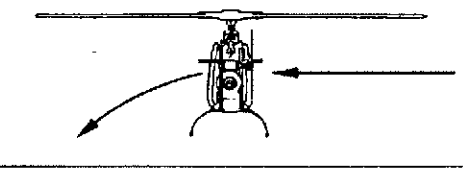
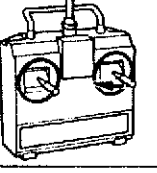
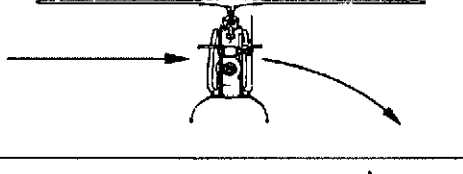
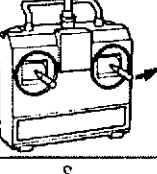
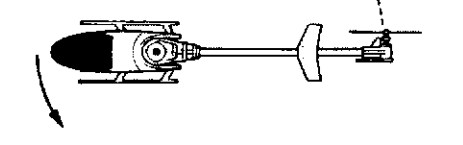
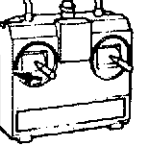
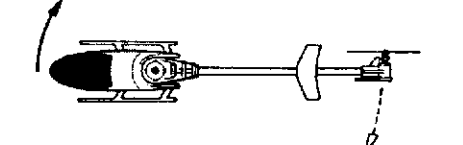
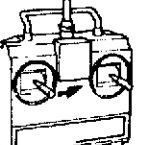
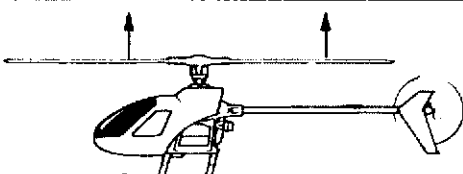
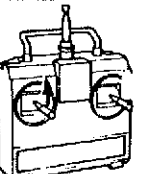
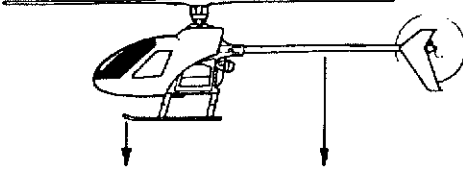
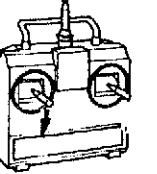


- Confirm that no one else is on your frequency before turning on your radio system.



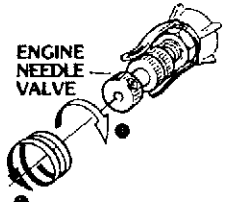
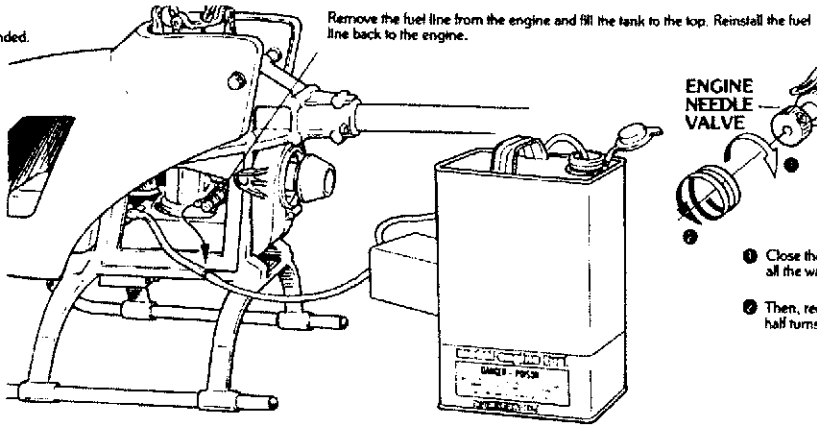
- Perform a range check according to your radios instruction manual.

CONCEPT 30 CONTROL REACTIONS

<p>TILTS AND MOVES FORWARD</p>			<p>ELEVATOR STICK PUSHED FORWARD</p>
<p>TILTS AND MOVES BACKWARD</p>			<p>ELEVATOR STICK BACK</p>
<p>TILTS AND MOVES LEFT</p>			<p>AILERON TO THE LEFT</p>
<p>TILTS AND MOVES RIGHT</p>			<p>AILERON TO THE RIGHT</p>
<p>THE NOSE MOVES LEFT. COUNTERCLOCKWISE ROTATION.</p>			<p>RUDDER STICK TO THE LEFT</p>
<p>THE NOSE MOVES RIGHT. CLOCKWISE ROTATION.</p>			<p>RUDDER TO THE RIGHT</p>
<p>AS THE ENGINE'S RPMS INCREASE THE BLADE PITCH ALSO INCREASES AND THE HELICOPTER LIFTS UP.</p>			<p>ENGINE THROTTLE STICK HIGH</p>
<p>AS THE ENGINE'S RPMS DECREASE THE BLADE PITCH DECREASES AND THE HELICOPTER DESCENDS.</p>			<p>ENGINE THROTTLE STICK LOW</p>

FUELING

A fuel of 10% or 15% nitro is recommended.



- 1 Close the needle valve all the way.
- 2 Then, reopen one and a half turns.

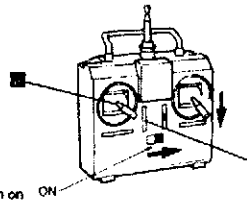


Colored helicopter fuel is available.

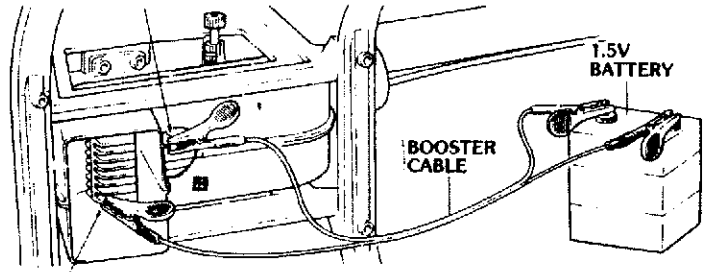
STARTING THE ENGINE

This starting procedure is set up so that the main rotor head will not suddenly turn. Please follow it carefully.

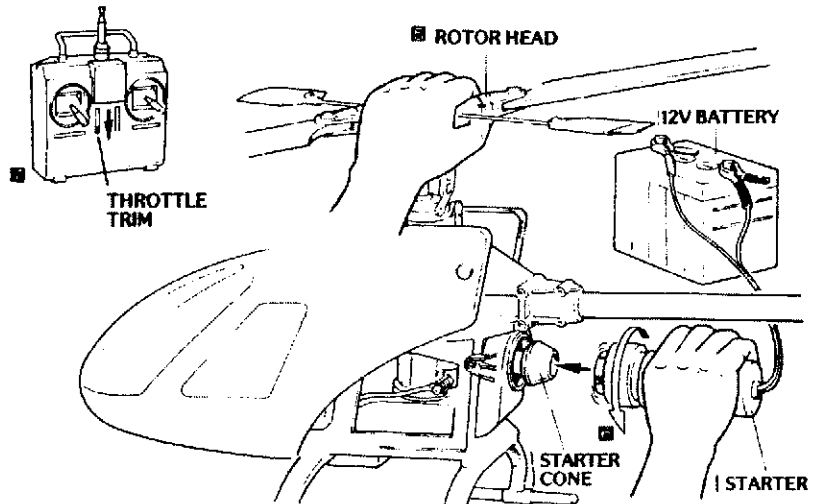
- 1 Turn on the radio system. (In sequence-transmitter, receiver and gyro).
- 2 Keep the engine control stick in the low position.
- 3 Set the engine control trim in the neutral position. Low stick and partial trim will allow the engine to start without engaging the clutch.



- 4 Connect a booster cable or glow plug clip to the glow plug and then to a 1.5V battery.

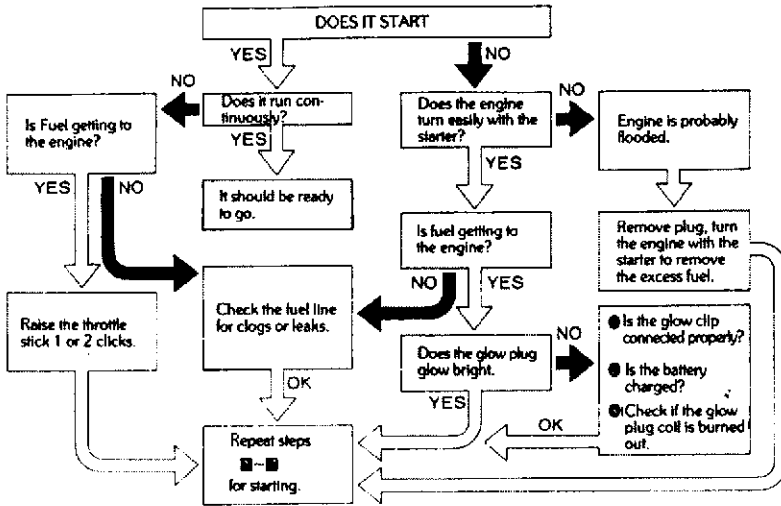


- 5 Hold the rotor head firmly in your left hand.
- 6 The starter should turn in the direction of the arrow. If not switch the battery leads. Press the starter against the starter cone and start the engine. Remove when it fires.

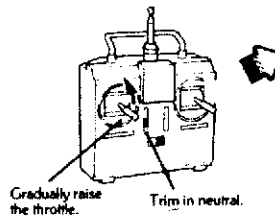


- 7 When the throttle trim is set low the engine should stop. (See step 13 if it doesn't readjust the linkage). This is an important safety adjustment.

ENGINE TROUBLESHOOTING DIAGRAM

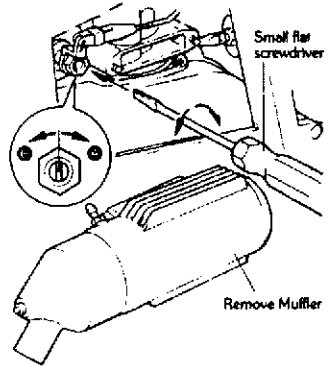


- If the engine does not start check the above chart.
- The engine should start if there is good fuel flow and the plug glows bright.



IDLE SPEED ADJUSTMENT

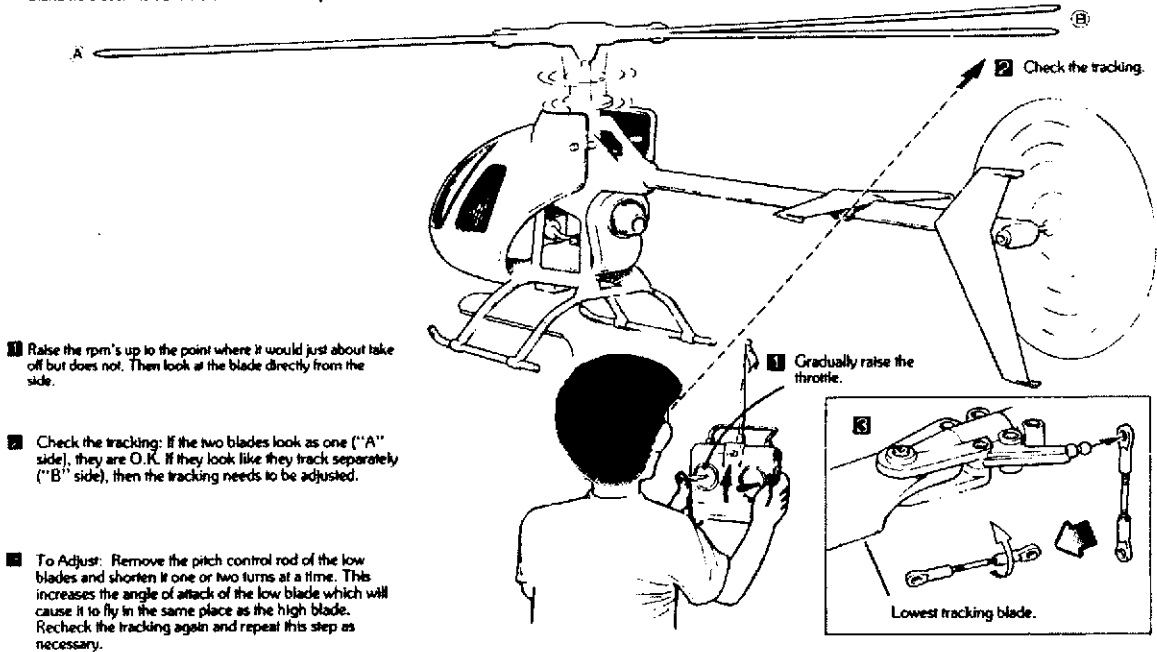
- 1 If the engine sputters and stops, the idle fuel mixture is too rich. Turn 1/8 turn toward (below)
- 2 If the engine stops abruptly with a dry sound, the idle fuel mixture is too lean turn 1/8 turn toward (below)



FLYING STEP 1: CHECKING THE TRACKING

Adjust the tracking to line up the pitch angles of the main blades.

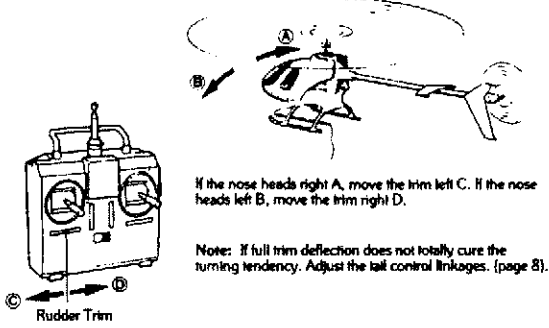
- Start the engine and set the helicopter on a smooth surface well away from any obstacles (preferably at a flying field).
- Stand no closer than 5 meters from the helicopter.



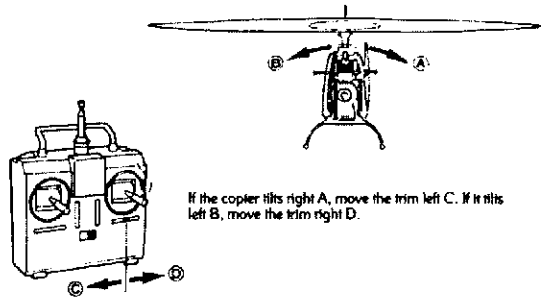
FLYING STEP 2: ADJUSTING THE TRIM

As the engine speed increases and the helicopter is close to take off, you may notice a tendency for the helicopter to tip or rotate instead of wanting to lift straight up. If this happens, slow the copter and adjust the trim so it lifts straight.

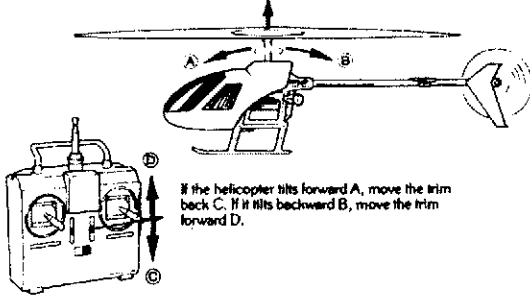
1 ADJUST THE TAIL ROTOR TRIM



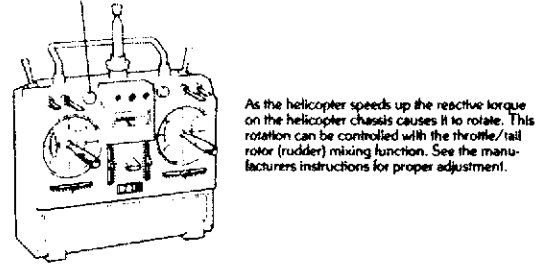
2 ADJUST THE LEFT/RIGHT CYCLIC TRIM



3 ADJUST THE FORE/AFT CYCLIC TRIM



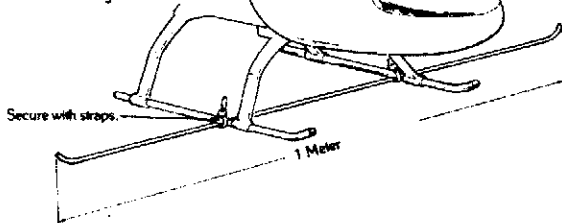
4 ADJUST THE THROTTLE/TAIL ROTOR MIXING MIXING CONTROL



FLYING STEP 3: BEFORE YOU BEGIN TO HOVER

The main fundamental flying technique of a helicopter is hovering. If you cannot hover you will be unable to fly or land. Therefore, spend plenty of time practicing this technique. Before flying observe the following:

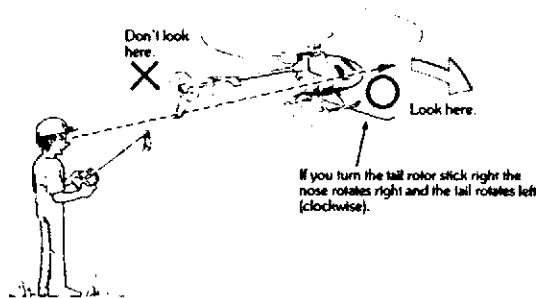
- 1 If you are a beginner, it is helpful to install a safety bar or training gear for easier landings.



- 2 When practicing the hover always face the wind. This will keep the tail rotor more stable.

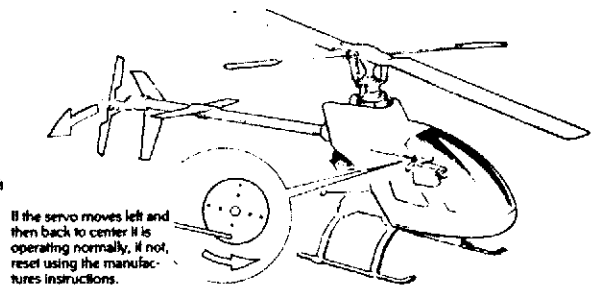


- 3 When flying, always look at the nose of the helicopter and not the tail because it is the nose that turns in the direction of your command. See below.



- 4 Check the Gyro Direction.

Turn on the transmitter, receiver and gyro. With your hand, quickly move the helicopter in the direction of the arrow and stop. At the same time watch the tail rotor servo.

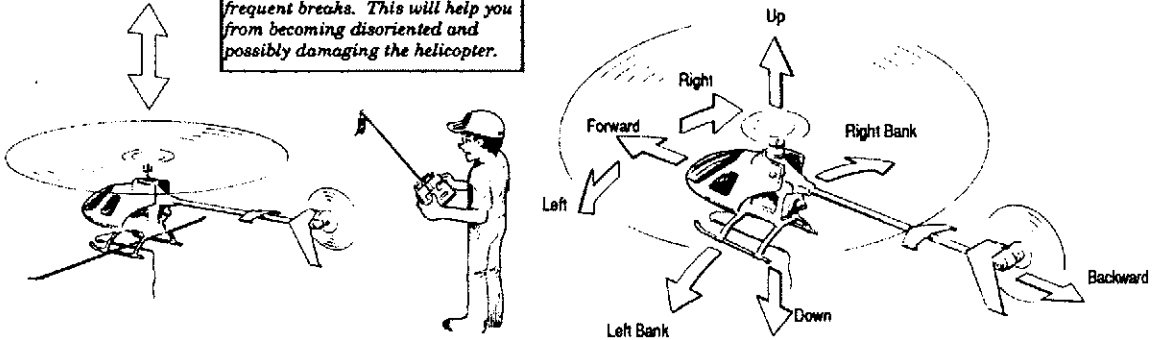


FLYING STEP 4: PRACTICE HOVERING

- Stand about 5 meters from the helicopter and attempt a smooth lift off up to a height of 3" to 4" and then slow the engine, and carefully land the helicopter. Repeat this process until you can smoothly take off and land consistently. Then practice raising the helicopter higher.

- A hovering helicopter will never stay in one spot by itself. You must constantly "read" which direction the helicopter will want to drift and move the control sticks on the transmitter so that the helicopter will stay stationary. Try not to go to high until you can keep the helicopter stationary.

Stay calm at all times and take frequent breaks. This will help you from becoming disoriented and possibly damaging the helicopter.

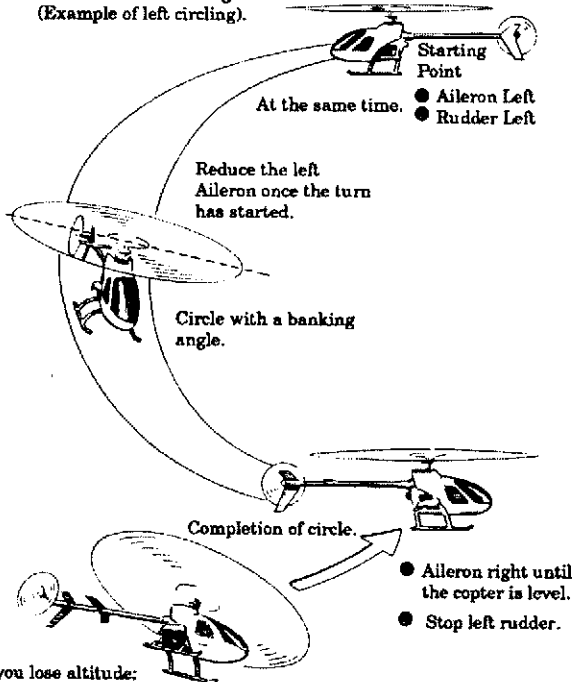


Once hovering is mastered you will have learned the most important and most common flight technique.

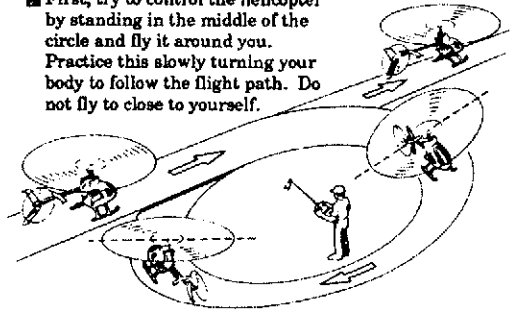
FLYING STEP 5: FLYING CIRCLE

After you have mastered hovering, you may try flying a circle around yourself slowly trying to keep the nose facing the direction of the flight. At slow speed you should be able to clearly see the flight attitude of the helicopter. Always keep the tail facing away from you until you are competent at flying "Nose In". To learn "Nose In" hovering, go back to step 4, Practice Hovering" and point the nose towards you. Take your time and be extra careful when attempting this difficult maneuver.

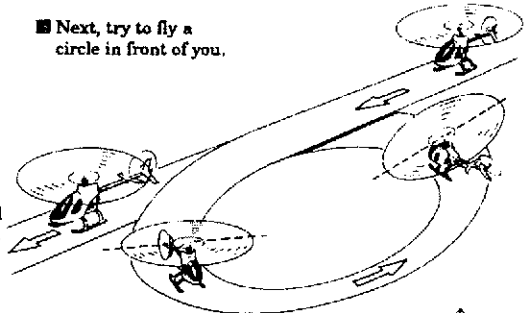
- Basic control of circling
(Example of left circling).



- First, try to control the helicopter by standing in the middle of the circle and fly it around you. Practice this slowly turning your body to follow the flight path. Do not fly to close to yourself.



- Next, try to fly a circle in front of you.



If you lose altitude:

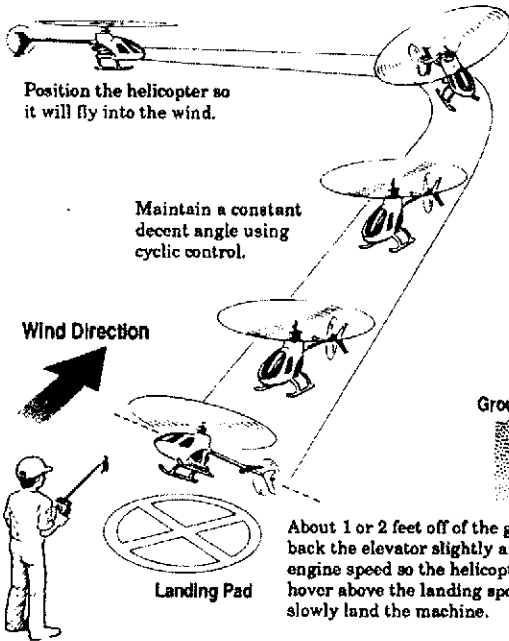
- Slowly raise the engine speed enough to maintain level flight.
- Give slight backward cyclic (elevator)
- Doing one or both of these should raise the height.



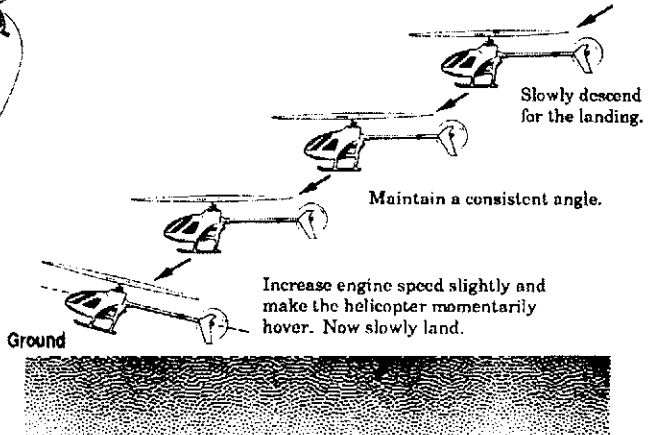
FLYING STEP 6: LANDING

Landing is performed by flying into the wind and gradually guiding the helicopter towards the landing spot. Once you have started forward flight, the most common mistake is forgetting that you must return to hovering before landing. Landing requires more power as you near the ground.

■ Basic landing control



■ Landing approach angle.



In order to perform a smooth decent, very delicate engine speed changes are necessary. Practice landings until you can do them well.

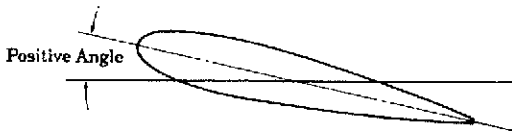
FLYING STEP 7: AUTO-ROTATION

The Concept 30 is equipped with auto rotation system to minimize the damage of the helicopter in case the engine should stop during flight. Control can be retained by using the Autorotation technique.

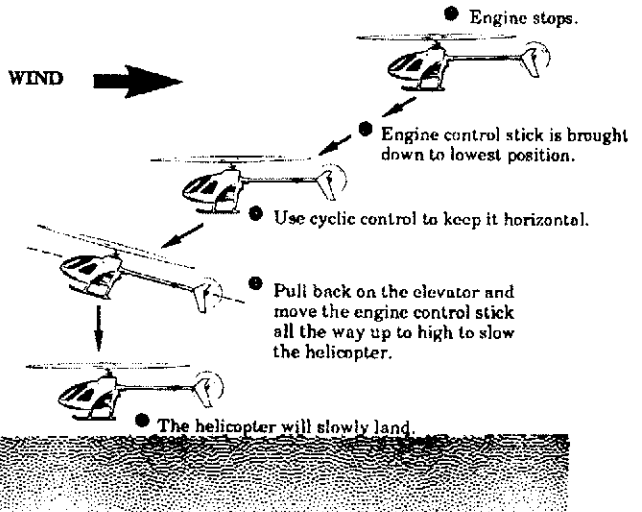
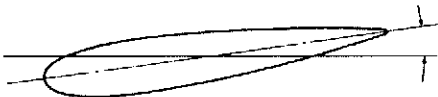
AUTO ROTATION

By making the main rotor pitch negative at low throttle, if the engine quits, the blades would continue to spin as the helicopter descends. Just before touching the ground the engine control is moved to the high position to slow the helicopter so it can land safely. It is most important to become familiar with the "Throttle Hold" switch on your transmitter. Experiment and prepare yourself by turning this switch ON and OFF while the helicopter is on the ground.

- For normal flights the pitch is positive.

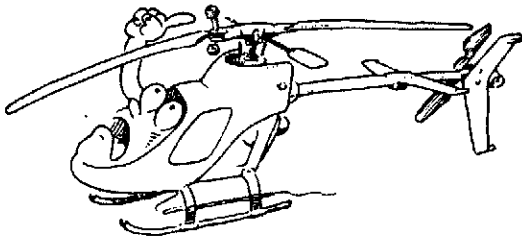


- For auto rotation capabilities set the low end pitch to -5° angle.

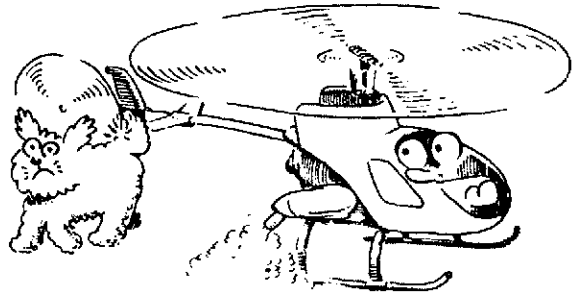


FOR SAFE FLIGHTS ALWAYS OBSERVE THE FOLLOWING

1 Check that there are no loose nuts and screws.

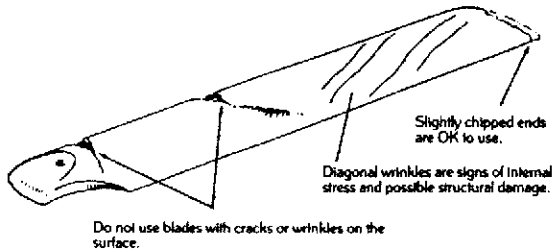


2 Keep away from any obstacles.

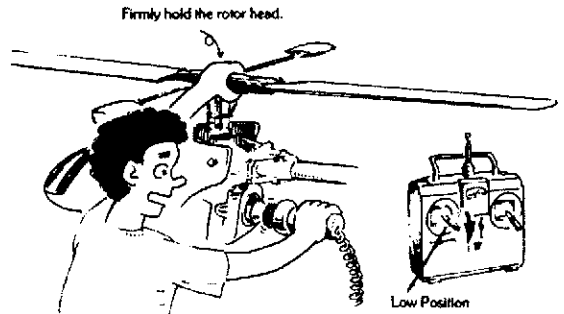


3 Do not use damaged blades.

Main rotor blades that may have cracked when flying should be replaced.



4 Use caution when starting the engine.

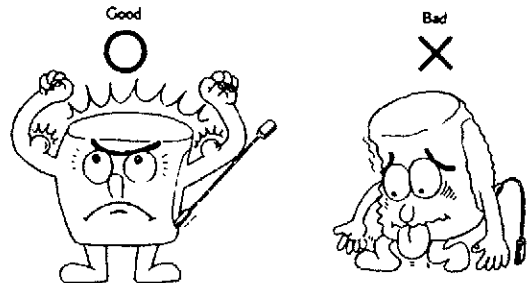


5 Check the flying field over before flying to locate any hazards



6 Be sure the batteries are fully charged.

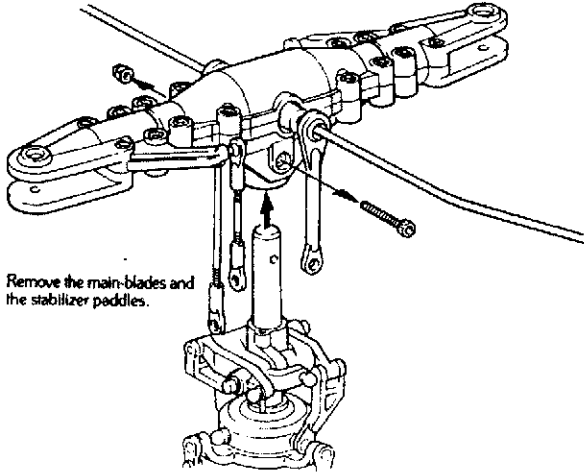
If your gyro is connected to the receiver battery, no more than two flights are recommended for a 500 mAh battery and no more than four flights for a 1000 mAh battery.



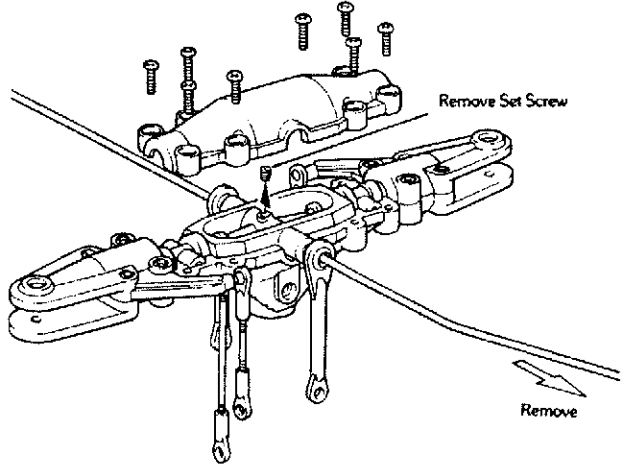
PARTS REPLACEMENT

REPLACEMENT OF THE STABILIZER BAR (FLYBAR)

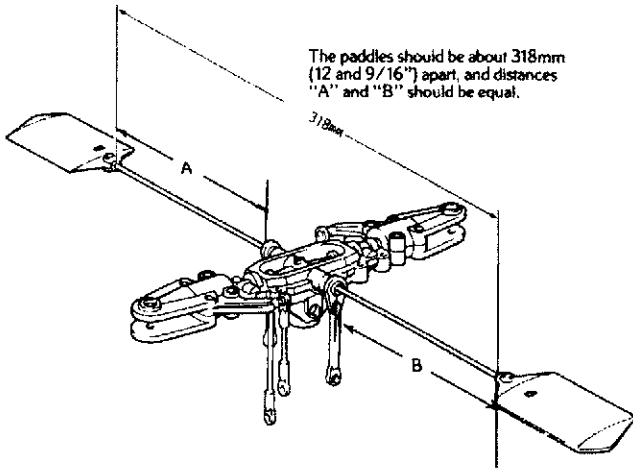
- 1** Disconnect the linkages and remove the rotor head.



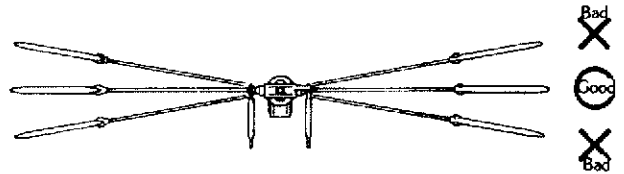
- 2** First remove the top cover and then the set screw. Next, pull the bar out. If you have drilled a hole in the rotor head (step 6) you do not have to remove the rotor head.



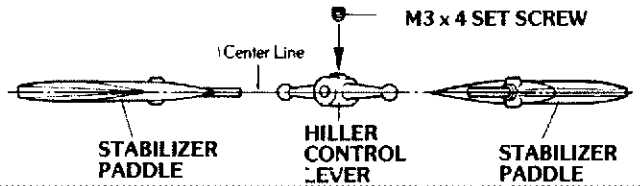
- 3** Insert the new stabilizer bar and reinstall the stabilizer paddles.



- 4** Slide the bar so that the head is balanced.

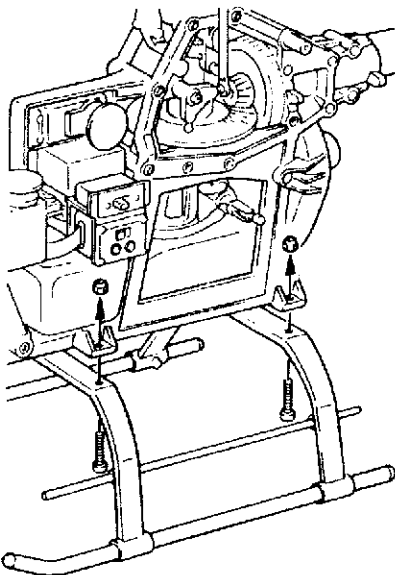


Tighten the Set Screw

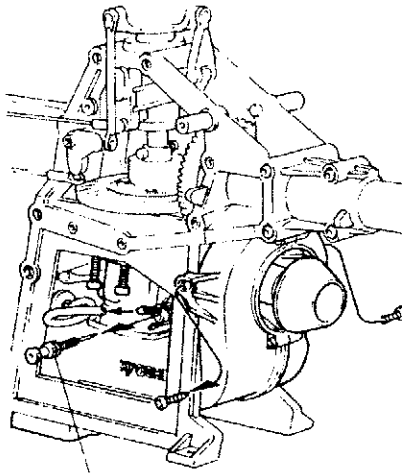


REMOVING THE ENGINE (INSTALL IN THE REVERSE ORDER)

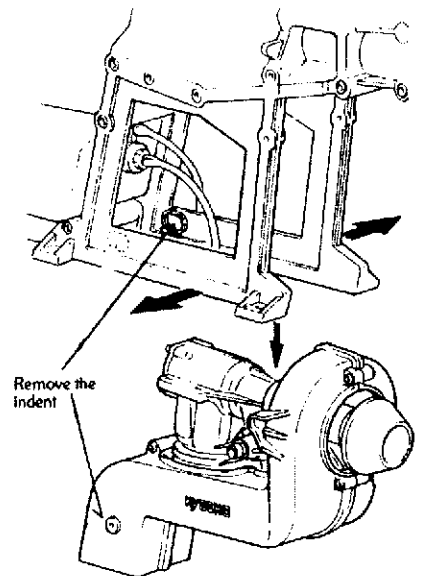
- 1** Remove the landing skids.



- 2** Next, remove the muffler, fuel line, linkage rod, and the needle valve. Then remove the engine mounting and shroud screws.

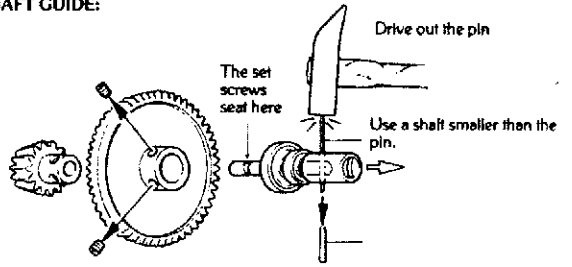
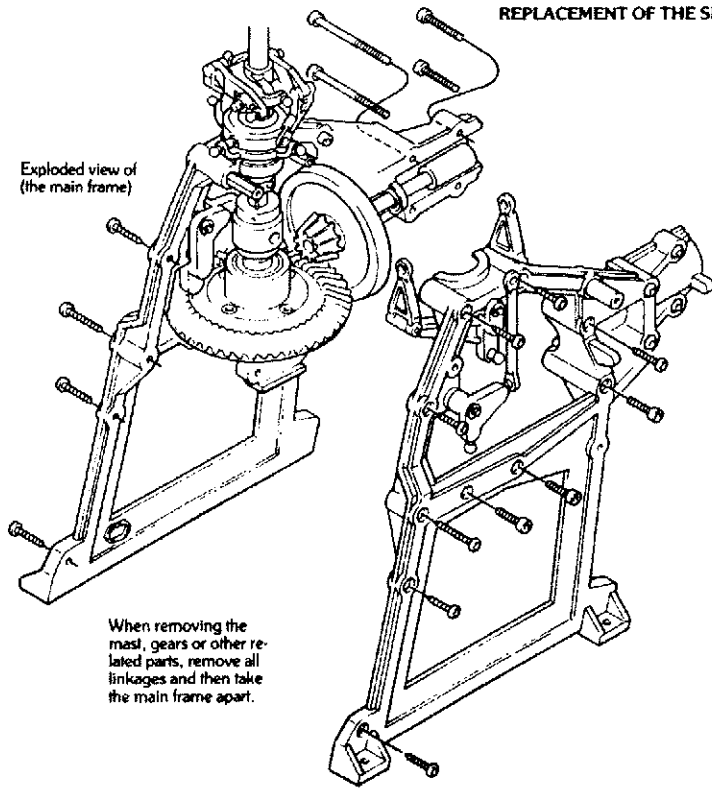


- 3** Spread the lower frame outward, lower the engine together with the fan shroud.

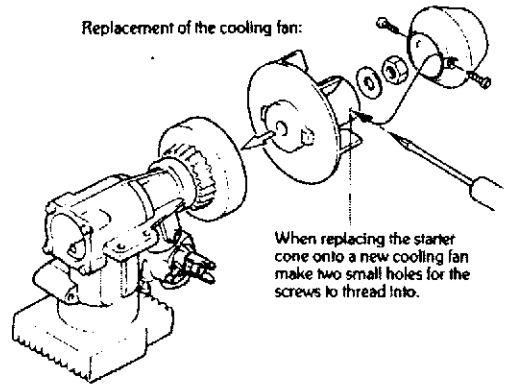


PARTS REPLACEMENT (CONT'D)

REPLACEMENT OF THE SHAFT GUIDE:

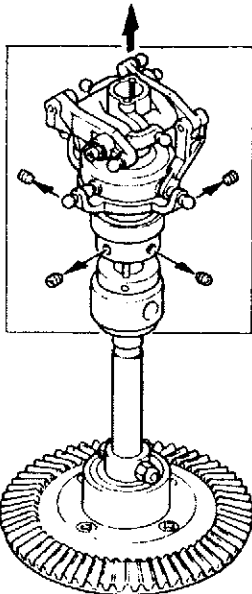


Replacement of the cooling fan:

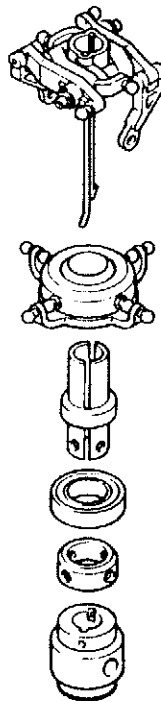


DISASSEMBLING THE SWASHPLATE

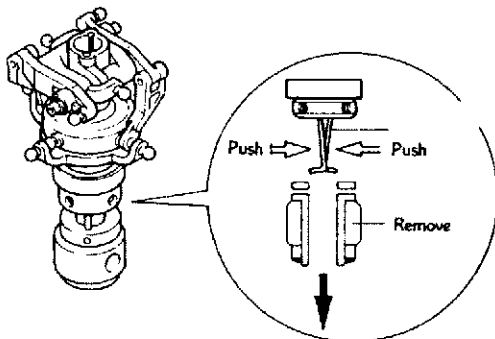
1 Remove the 4 set screws and pull the assembly off the mast.



3 Disassembled Parts

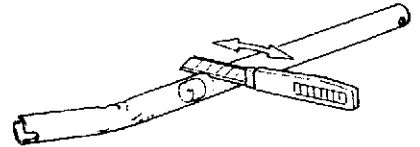


2 Push in the wire rods and remove the parts as shown.

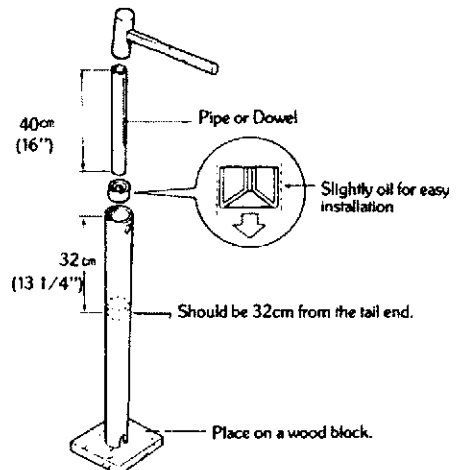


REPLACEMENT OF THE DRIVE SHAFT GUIDE.

1 Cut the boom on both sides of the guide and then carefully tap it out with a hammer and dowel rod (or pipe).



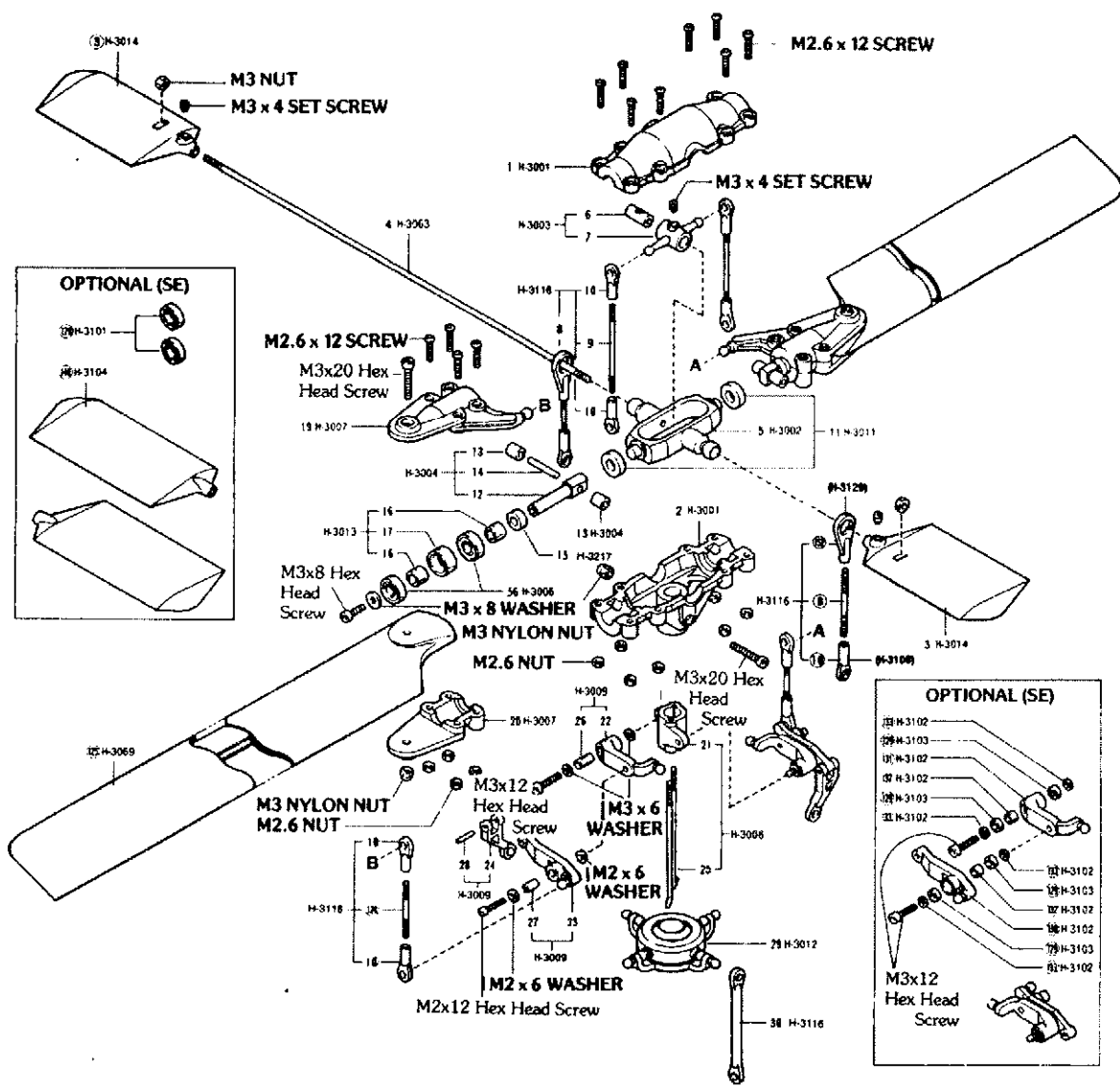
2 To insert, drive the guide in its proper direction using a short pipe or dowel.



CONCEPT 30 PARTS LIST

Key—Qty.	Qty.	Key—Qty.	Qty.	Key—Qty.	Qty.
① Rotor Head (B)	1	③② Main Frame (R)	1	⑩⑩ Antenna Tube	1
② Rotor Head (A)	1	③③ Bevel Pinion	1	⑩⑪ Body	1
③ Stabilizer Paddles	2	③④ Counter Gear	1	⑩⑫ Canopy	1
④ Flybar	1	③⑤ Secondary Shaft	1	⑩⑬ Switch Mount	1
⑤ Stabilizer Seesaw	1	③⑥ 1350 Bearing	5	⑩⑭ Body Mount (A)	1
⑥ Control Lever Bushing	1	③⑦ Tail Drive Coupling	1	⑩⑮ Body Mount (B)	1
⑦ Hiller Control Lever	1	③⑧ 2 x 10mm Drive Pin	1	⑩⑯ Tank	1
⑧ Stabilizer Control Rod	2	③⑨ 2 x 14mm Link Pin	2	⑩⑰ Tank Weight	1
⑨ Flybar Control Rod	2	③⑩ Threaded Insert (S)	3	⑩⑱ Tank Adapter	1
⑩ Ball End	11	③⑪ Threaded Insert (L)	1	⑩⑲ Tank Cap	1
⑪ See-Saw Bushing	2	③⑫ Starter Cone	1	⑩⑳ Seal Washer	1
⑫ Feathering Shaft	2	③⑬ Cooling Fan	1	⑩㉑ Seal Nut	1
⑬ Flapping Hinge Bushing	4	③⑭ Instruction Manual	1	⑩㉒ Silicon Tube (small)	1
⑭ Flapping Pin (3mm x 18)	2	③⑮ Clutch	1	⑩㉓ Silicon Tube (large)	1
⑮ Flapping Damper	2	③⑯ Drive Gear/Clutch Bell	1	⑩㉔ Tail Control Guide	1
⑯ BRG Spacer	4	③⑰ Fan Shroud (R)	1	⑩㉕ Tail Control Rod	1
⑰ Grip Spacer	2	③⑱ Fan Shroud (L)	1	⑩㉖ Ball Link	1
⑱ 1060 Bearing	1	③⑲ Tail Drive Shaft	1	⑩㉗ Tail Control Link	1
⑲ Main Rotor Grip (A)	2	③⑳ Tail Boom	1	⑩㉘ Control Rod (Tail)	1
⑳ Main Rotor Grip (B)	2	③㉑ Shaft Guide	1	⑩㉙ Control Rod (Throttle)	1
㉑ Mixing Base	1	③㉒ Stabilizer Fin	1	⑩㉚ Control Rod (Pitch)	1
㉒ Mixing Lever	2	③㉓ Bracket	1	⑩㉛ Pitch Control Rod	2
㉓ Cyclic Lever	2	③㉔ Vertical Fin	1	⑩㉜ Main Rotor Blade	2
㉔ Cyclic Lever Link	2	③㉕ Tail Drive Joint	1	⑩㉝ Clevis	1
㉕ Pitch Rod	2	③㉖ 1480 Bearing	2	⑩㉞ Pitch Lever	1
㉖ Mixing Lever Bushing	2	③㉗ Tail Input Gear	1	⑩㉟ 6 x 12mm Bearing (SE)	2
㉗ Lever Bushing (A)	3	③㉘ Tail Output Gear	1	⑩㊱ 3 x 16mm Bearing (SE)	8
㉘ Cyclic Pin (2mm x 10)	2	③㉙ 2mm x 12mm Gear Pin	1	⑩㊲ Mixing Lever (SE)	2
㉙ Swash Plate Assembly	1	③㉚ Tail Gear Box (R)	1	⑩㊳ Cyclic Lever (SE)	2
㉚ Aileron Link Rod	1	③㉛ Tail Gear Box (L)	1	⑩㊴ Bearing Collar (SE)	4
㉛ Elevator Link Rod	2	③㉜ Tail Output Shaft	1	⑩㊵ Bearing Washer (SE)	8
㉜ Elevator Lever	1	③㉝ 1050 Bearing	2	⑩㊶ Pitch Slider (SE)	1
㉝ Lever Pin	2	③㉞ Tail Shaft Thrust Coller	1	⑩㊷ Pitch Slider Ring (SE)	1
㉞ Fore-aft Cyclic Control Rod	1	③㉟ Tail Pitch Lever	1	⑩㊸ Slide Ring Nut (SE)	1
㉟ Left-Right Cyclic/Throttle Control Rod	2	③㊱ Tail Pitch Ring	1	⑩㊹ A-1510 Bearing (SE)	2
㊱ Aileron Lever	1	③㊲ Tail Pitch Ring Pin	1	⑩㊺ Shaft Guide (SE)	1
㊲ Lever Bushing(B)	1	③㊳ 1060 Bearing	2	⑩㊻ 3 x 6mm Bearing (SE)	1
㊳ Mast	1	③㊴ Tail PC Plate	1	⑩㊼ Tail Center Hub	1
㊴ Pitch Rod Guide	1	③㊵ Ball End (S)	2	⑩㊽ M3 x 14 Threaded Rod	2
㊵ 6801 Bearing	1	③㊶ Slide Bushing	1	⑩㊾ Thrust Bearing	2
㊶ Mast Stopper	1	③㊷ Pitch Ring Nut	1	⑩㊿ Tail Grip (B)	2
㊷ Pitch Slider	1	③㊸ Rubber Band	1	⑪① Tail Grip (A)	2
㊸ Pitch Slide Link	1	③㊹ Body Mount	2	⑪② Tail Blade	2
㊹ Pitch Slide Thrust Washer	1	③㊺ Sub Frame	1	⑪③ Grommet	2
㊺ Stopper Ring	1	③㊻ Servo Mounting Plates	10	⑪④ Body Installation Screw	2
㊻ One Way Shaft	1	③㊼ Wire Holder	2	⑪⑤ Stabilizer Paddle (SE)	2
㊼ Main Gear	1	③㊽ Front Frame Retainer	2	⑪⑥ Decal	1
㊽ One Way Housing	1	③㊾ Front Frame	1	⑪⑦ Mast Stopper Ring	1
㊾ 1680 Bearing	1	③㊿ Brace	2	⑪⑧ Double Sided Tape	1
㊿ Engine Mount	1	④① Skid	2	④② Ball End (Large)	2
④① Main Frame (L)	1	④③ Skid Cap	4	④③ Clutch Liner	1

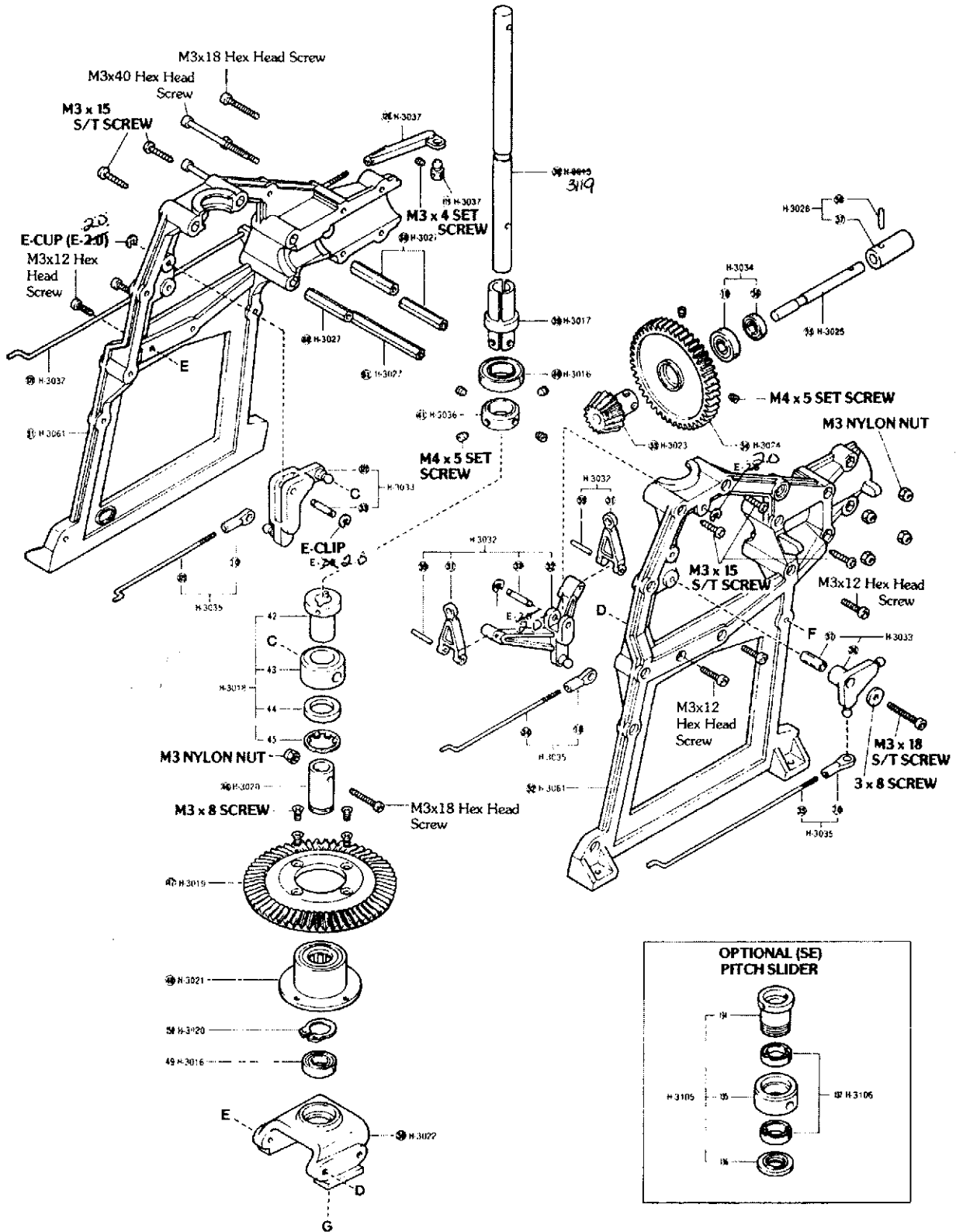
EXPLODED PARTS DIAGRAM



Stock #	Parts Pack	Description	Contains
KYOE1010	H-3001	Rotor Head	(1) (2) x1
KYOE1020	H-3002	See-Saw	(5) x1
KYOE1030	H-3003	Hub Control Set	(6) (7) x1
KYOE1040	H-3004	Feathering Shaft Set	(12) (14) x2 (13) x4
KYOE5015	H-3217	Hard Dampers Rod	(15) x10
KYOE1060	H-6006	5x13x4mm Bearing	(56) x2
KYOE1070	H-3007	Main Rotor Grip	(19) (20) x2
KYOE1080	H-3008	Mixing Base	(21) x1 (25) x2
KYOE1090	H-3009	Mixing Lever Set (DX)	(22) (23) (24) (26) (27) (28) x2

Stock #	Parts Pack	Description	Contains
KYOE6140	H-3116	Linkage Set (A)	(30) x1 (8) (9) (124) x2 (10) x8
KYOE1110	H-3011	Stabilizer See-Saw Bushing	(11) x2
KYOE1120	H-3012	Swash Plate Assembly	(29) x1
KYOE1130	H-3013	Grip Spacer Set	(17) x2 (16) x4
KYOE1140	H-3014	Stabilizer Paddle	(3) x2
KYOE1150	H-3063	Stabilizer Bar	(4) x2
KYOE1160	H-3069	Main Rotor Blade	(125) x2
KYOE5060	H-3109	Cyclic Lever	(24) x2
KYOE6270	H-3129	Ball End (Large)	(152) x6

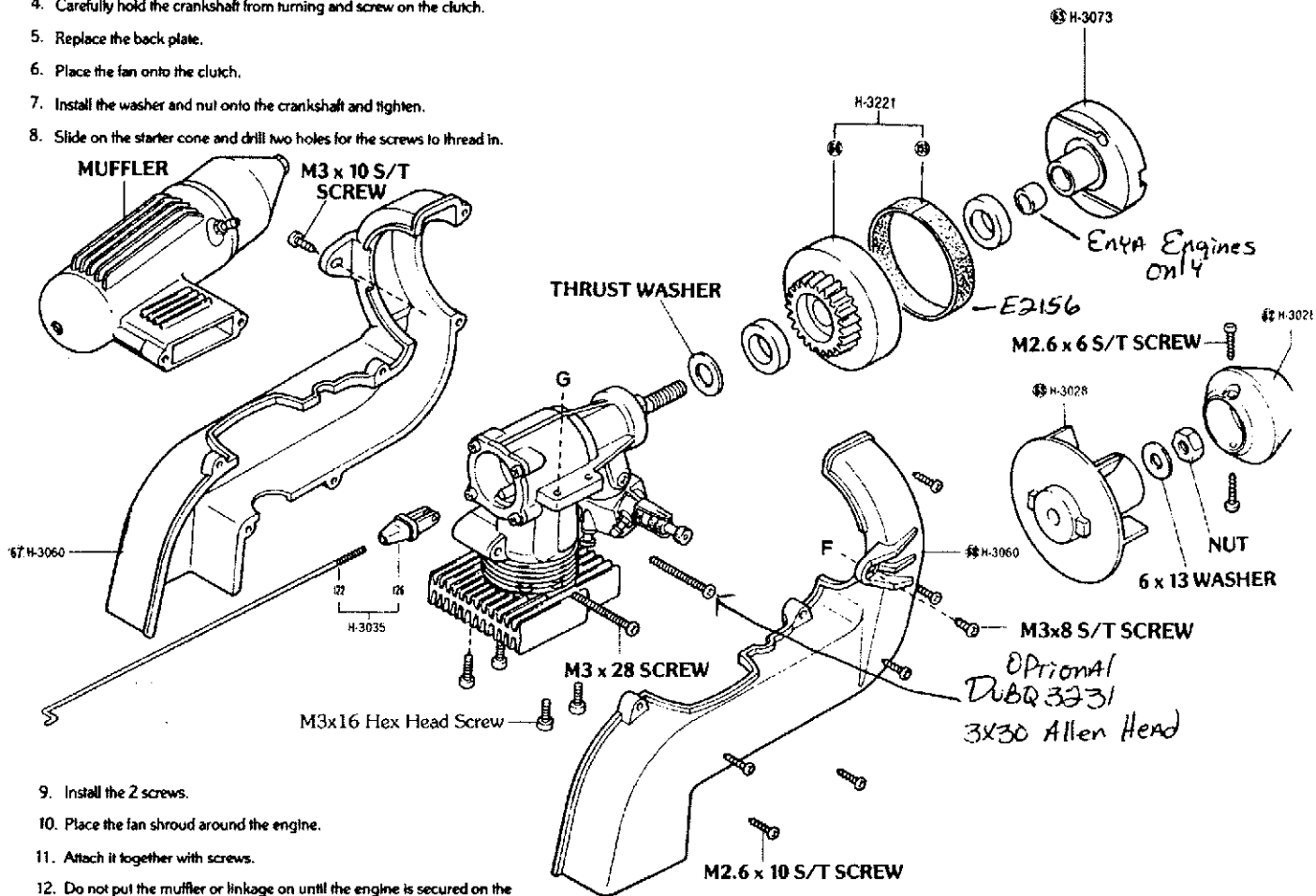
EXPLODED PARTS DIAGRAM



EXPLODED PARTS DIAGRAM

ENGINE INSTALLATION:

1. Remove the engines back plate.
2. Put the thrust washer and drive gear onto the crankshaft.
3. Grease the bearing surface of the clutch liberally. (For trouble free operation, periodically grease the clutch where shown.)
4. Carefully hold the crankshaft from turning and screw on the clutch.
5. Replace the back plate.
6. Place the fan onto the clutch.
7. Install the washer and nut onto the crankshaft and tighten.
8. Slide on the starter cone and drill two holes for the screws to thread in.



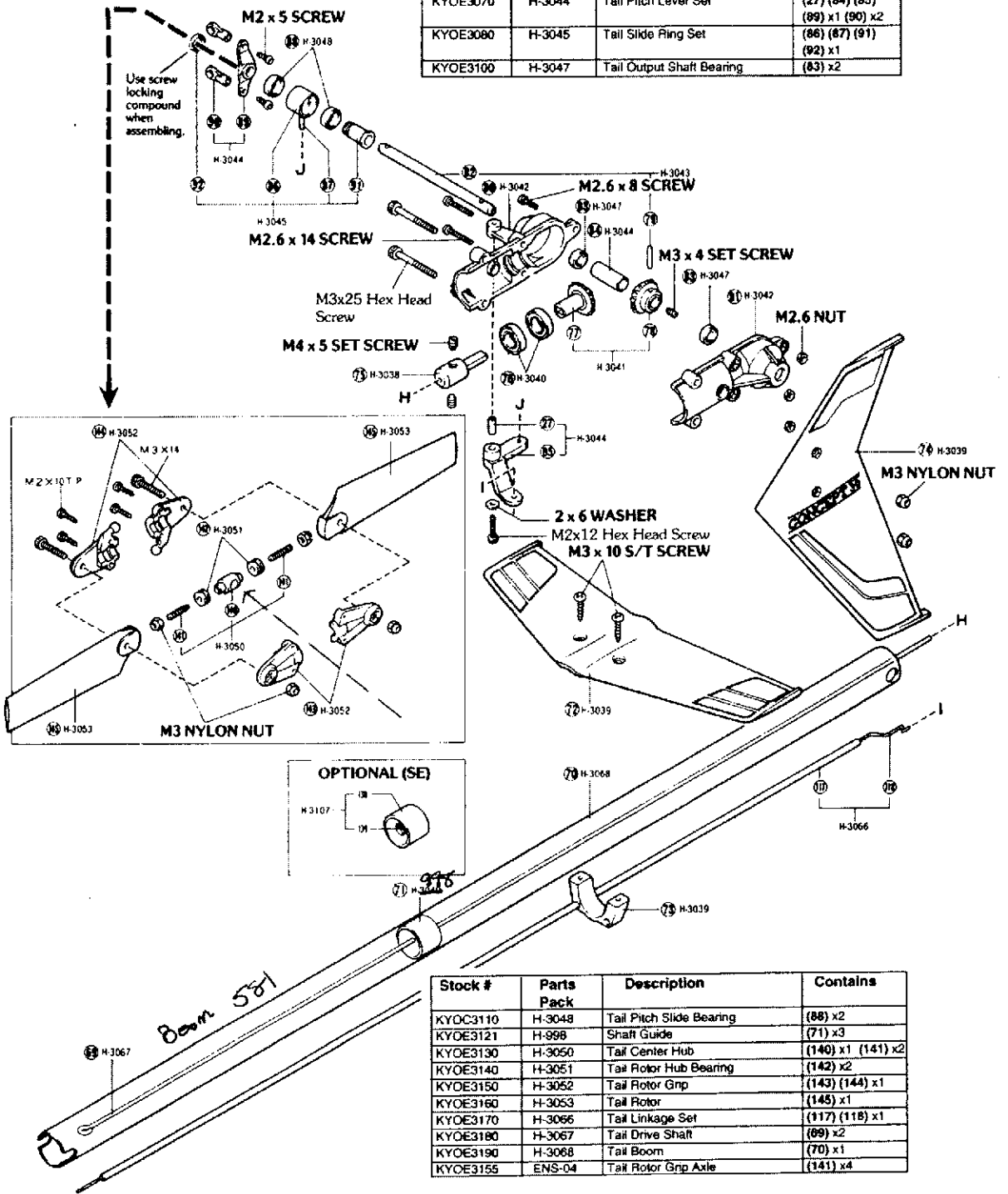
9. Install the 2 screws.
10. Place the fan shroud around the engine.
11. Attach it together with screws.
12. Do not put the muffler or linkage on until the engine is secured on the helicopter.

Stock #	Parts Pack	Description	Contains
KYOE6170	H-3119	Main Mast	(38) x1
KYOE2020	H-3016	Main Mast Bearing	(40) (49) x1
KYOE2030	H-3017	Pitch Rod Guide	(39) x1
KYOE2040	H-3018	Pitch Slider Set	(42) (43) (44) (45) x1
KYOE2050	H-3019	Main Gear	(47) x1
KYOE2060	H-3020	One-Way Shaft	(46) x1
KYOE2070	H-3021	One-Way Housing	(48) x1
KYOE2080	H-3022	Engine Mount	(50) x1
KYOE2090	H-3023	Bevel Pinion Gear	(53) x1
KYOE2100	H-3024	Counter Gear	(54) x1
KYOE2110	H-3025	Secondary Shaft	(55) x1
KYOE2120	H-3026	Tail Drive Coupling	(57) (58) x1
KYOE2130	H-3027	Threaded Inserts	(61) x1 (60) x3
KYOE2140	H-3028	Starter Cone Set	(62) (63) x1
KYOE2155	H-3073	One Piece Clutch	(227) x1
KYOE5042	H-3221	Drive Gear	(66) (153) x1

Stock #	Parts Pack	Description	Contains
KYOE2180	H-3032	Elevator Lever Set	(32) (33) (212) x1 (59) x2
KYOE6180	H-3120	Aileron Pitch Lever Set	(32) (33) x1 (31) (59) x2
KYOE2200	H-3034	Secondary Shaft Bearing	(18) (56) x1
KYOE2210	H-3035	Linkage Set (B)	(34) (35) (122) (123) (126) x1 (10) x3
KYOE2220	H-3036	Mast Stopper	(41) x1
KYOE2230	H-3037	Rudder Linkage Rod	(119) (120) (121) x1
KYOE2240	H-3060	Fan Shroud	(67) (68) x1
KYOE2250	H-3061	Main Frame	(51) (52) x1
KYOE5070	H-3110	Elevator Link Rod	(31) x2
OSMG9012		Metal Throttle Lever	
KYOE2156	H-997	Clutch Liner	(153) x3

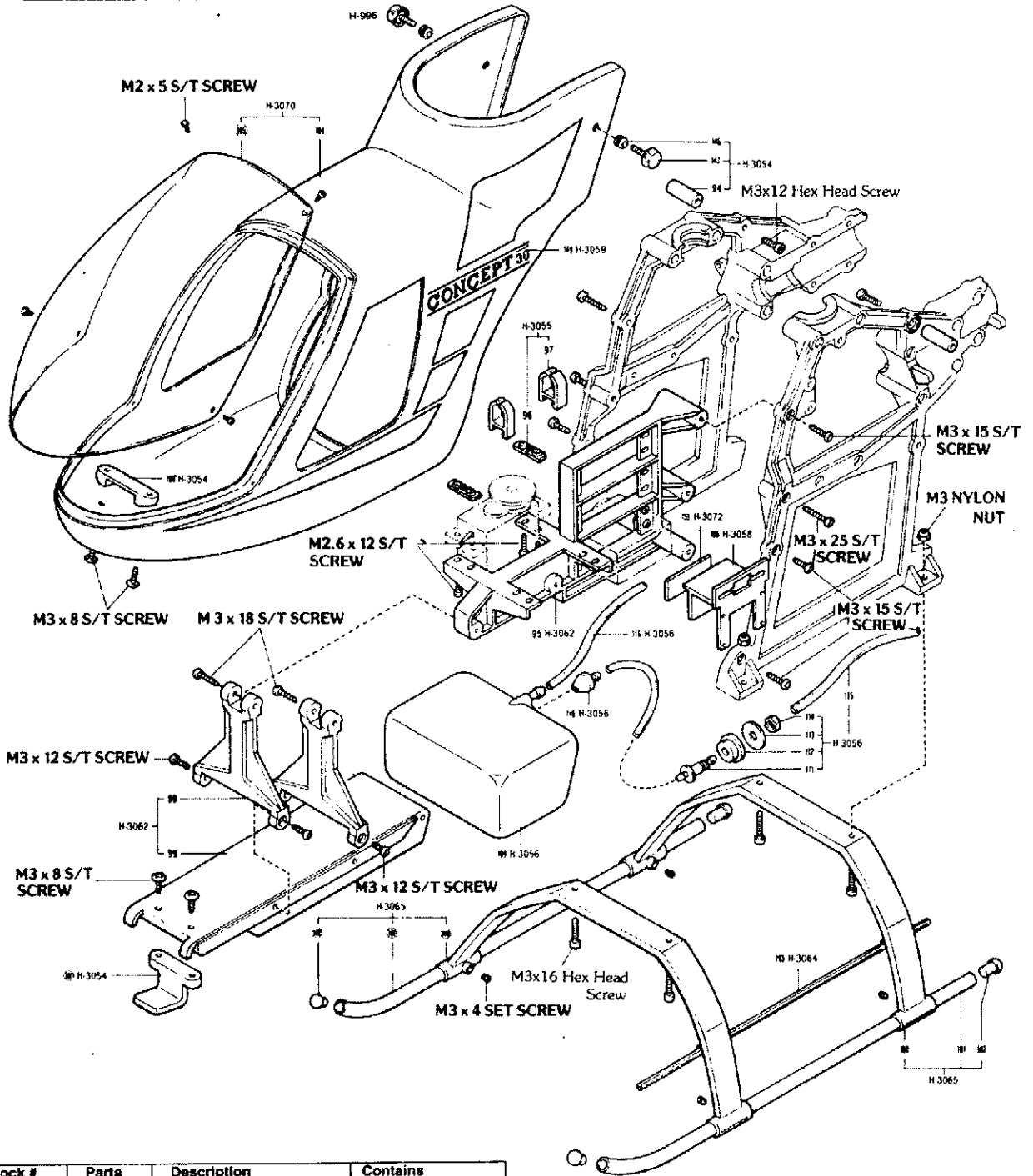
EXPLODED PARTS DIAGRAM

Stock #	Parts Pack	Description	Contains
KYOE3010	H-3038	Tail Drive Joint	(75) x1
KYOE3020	H-3039	Tail Wing Set	(72) (73) (74) x1
KYOE3030	H-3040	8mmx14mm Bearing	(78) x2
KYOE3040	H-3041	Tail Gear Set	(77) (78) x1
KYOE3050	H-3042	Tail Gear Case	(80) (81) x1
KYOE3060	H-3043	Tail Output Shaft	(79) (82) x1
KYOE3070	H-3044	Tail Pitch Lever Set	(27) (84) (85) (89) x1 (90) x2
KYOE3080	H-3045	Tail Slide Ring Set	(86) (87) (91) (92) x1
KYOE3100	H-3047	Tail Output Shaft Bearing	(83) x2



Stock #	Parts Pack	Description	Contains
KYOC3110	H-3048	Tail Pitch Slide Bearing	(88) x2
KYOE3121	H-998	Shaft Guide	(71) x3
KYOE3130	H-3050	Tail Center Hub	(140) x1 (141) x2
KYOE3140	H-3051	Tail Rotor Hub Bearing	(142) x2
KYOE3150	H-3052	Tail Rotor Grp	(143) (144) x1
KYOE3160	H-3053	Tail Rotor	(145) x1
KYOE3170	H-3066	Tail Linkage Set	(117) (118) x1
KYOE3180	H-3067	Tail Drive Shaft	(89) x2
KYOE3190	H-3068	Tail Boom	(70) x1
KYOE3155	ENS-04	Tail Rotor Grp Axle	(141) x4

EXPLODED PARTS DIAGRAM



Stock #	Parts Pack	Description	Contains
KYOE4010	H-3054	Body Mount Set	(107) (108) x1 (94) (146) (147) x2
KYOE4020	H-3055	Servo Plate / Wire Holder	(97) x2 (96) x10
KYOE4030	H-3056	Fuel Tank Set	(109) (110) (111) (112) (113) (114) (115) (116) x1
KYOE4040	H-3057	Screw Set	(103) x5
KYOE4050	H-3058	Switch Mount	(106) x1
KYOE4060	H-3059	Decal	(149) x1
KYOE4070	H-3062	Front Frame Set	(95) (99) x1 (98) x2
KYOE4080	H-3064	Antenna Tube	(103) x5
KYOE4090	H-3065	Landing Gear Set	(100) (101) x2 (102) x4
KYOE4100	H-3070	Body	(104) (105) x1
KYOE5017	H-3098	Canopy Only	(105) x1
KYOE4115	H-3072	Double Sided Tape	(153) x1
KYOE6071	H-996	Canopy Screw	(147) x8

Stock #	Parts Pack	Description	Contains
OPTIONAL PARTS			
KYOE5010	H-3201	Flapping Hinge Bearing	Replaces (13)
KYOE5020	H-3202	Black Tail Boom	1 Tail Boom
KYOE5025	H-3205	Blade Case	1 Case
KYOE5030	H-3206	2 Blade Set & 1 Case	4 Blades & 1 Case

KYOE6275

BAGGED PARTS LIST (1)

(Check The Parts In The Kit)

Check to see if all the parts are correctly bagged as they are listed in the "List of Bagged Parts."
Your thorough understanding of the assembly will enable you to build the kit without any difficulty.

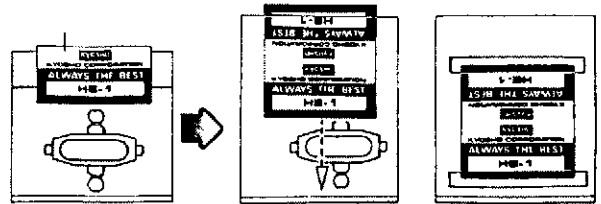
Check the components in the kit prior to your starting assembly.

(DX) Included in DX Kit only.
(SE) Included in SE Kit only.

Bag No.	Parts Name	Key No.
HE-1	Main Rotor Head	① ② × 1
	Stabilizer Seesaw	⑤ × 1
	Hiller Control Lever	⑥ ⑦ × 1
	Feathering Shaft	⑫ ⑬ × 2 ⑭ × 4
	Main Rotor Grip	⑲ ⑳ × 2
	Flapping Damper	⑲ × 2
	Blade Holder Bearing	⑤⑥ × 4
HE-2 (DX)	Mixing Lever Set (DX) (On Mast Assembly HE-8)	⑳ ㉑ ㉒ ㉓ ㉔ ㉕ × 2
HE-2 (SE)	Mixing Lever Set (SE) (On Mast Assembly HE-8)	㉒ ㉓ ㉔ ㉕ × 2 ㉖ × 4 ㉗ × 8
	Mixing Lever Bearing (SE) (On Mast Assembly HE-8)	㉘ × 8
HE-3	Linkage Set (A)	㉙ × 1 ㉚ ㉛ ㉜ × 2 ㉝ × 8
HE-4 (DX)	Stabilizer Seesaw Bushing	⑪ × 2
	Grip Spacer Set	⑰ × 2 ⑱ × 4
	Stabilizer Blade (DX)	③ × 2
	One Way Shaft	⑬ ⑭ × 1
	Main Gear & One Way Housing (w/Bearing)	⑰ ⑱ × 1
	Engine Mount (w/Bearing)	⑲ ⑳ × 1
	Counter Gear Assembly	Assembly (㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ × 1)
HE-4 (SE)	Stabilizer Seesaw Bearing (SE)	㉙ × 2
	Grip Spacer Set	⑰ × 2 ⑱ × 4
	Stabilizer Paddles (SE)	㉚ × 2
	One Way Shaft	⑬ ⑭ × 1
	Main Gear & One Way Housing (w/Bearing)	⑰ ⑱ × 1
	Engine Mount (w/Bearing)	⑲ ⑳ × 1
	Counter Gear Assembly	Assembly (㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ × 1)
HE-5	Starter Cone	⑳ ㉑ × 1
	Drive Gear (Clutch Bell)	㉒ × 1 (with liner)
	Clutch	㉓ × 1
HE-6	Elevator Lever Set	㉔ ㉕ × 1 ㉖ ㉗ × 2 (E-Ring × 2)
	Aileron Pitch Lever Set	㉘ ㉙ ㉚ ㉛ × 1 (E-Ring × 2)
	Rudder Linkage Set	㉜ ㉝ × 1
HE-7	Main Frame Inserts	⑥ × 1 ⑩ × 3
	Fan Shroud	⑰ ⑱ × 1
	Main Frame	㉑ ㉒ × 1
HE-8 (DX)	Mast Assembly (DX)	Assembly (㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿) (㊿ × 1 ㊽ × 2)

BAGGED PARTS LIST (2)

Under each part during assembly is a header number of the bag, which contains the part.
Do not discard the header when you pick up a part from the bag, but keep it in the bag or tape it down.



Bag No.	Parts Name	Key No.
HE-8(SE)	Mast Assembly (SE)	Assembly (21 22 23 24 25 26 27 28 29 30 X 1) 31 32 X 2
HE-9	Linkage Set (B)	33 34 35 36 X 1 37 X 2 38 X 3
HE-10	Tail Set	39 40 41 X 1
	Tail Gear Case	42 43 X 1
	Tail Rotor Grip	44 45 X 2
	Tail Blade	46 X 2
HE-11	Tail Drive Joint	47 X 1
	Tail Output Shaft	48 49 X 1
	Tail Output Shaft Bearing	50 X 2
	Tail Pitch Slide Bearing	51 X 2
	Tail Center Hub	52 X 1 53 X 2
	Tail Center Hub Bearing	54 X 2
	Tail Gear (w/Bearing)	Assembly (55 X 1 56 X 2) 57 X 1
HE-12	Tail Pitch Lever Set	58 59 60 61 X 1 62 X 2
	Tail Slide Ring	63 64 65 66 X 1 (With the part 87 pressed in place.)
HE-13	Body Catch Set	67 68 X 1 69 70 X 2
	Servo Mounting Plate	71 X 2 72 X 10
HE-14	Fuel Tank Set	73 74 75 76 77 78 79 80 X 1
HE-15	Switch Mount	81 X 1
	Front Frame Set	82 83 X 1 84 X 2
HE-16	Skid Set	85 86 X 2 87 X 4
	Double Sided Tape	88 X 1
	Rubber Band	89 X 1
HE-17 (DX)	Tail Linkage Set	90 91 X 1
	Stabilizer Bar (Flybar)	92 X 1
	Tail Boom (w/Shaft Guide) (DX)	(93 94 X 1) Pressed in Place
	Tail Drive Shaft	95 X 1
	Antenna Tube	96 X 1
Control Rod (Rudder)	97 X 1	
HE-17 (SE)	Tail Linkage Set	98 99 X 1
	Tail Boom (w/Shaft Guide) (SE)	(100 101 102 X 1) Pressed in Place
	Tail Drive Shaft	103 X 1
	Antenna Tube	104 X 1
	Control Rod (Rudder)	105 X 1
	Stabilizer Bar (Flybar)	106 X 1
HE-18	Decal	107 X 1
	Pitch Gauge	X 1
	Main Rotor	108 X 2
	Body Set	109 110 X 1
	Instruction	X 1
	Screw, Nut, Washer, Hexagon Wrench, Plug Wrench	Set

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